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MAGAZINE | AUGUST

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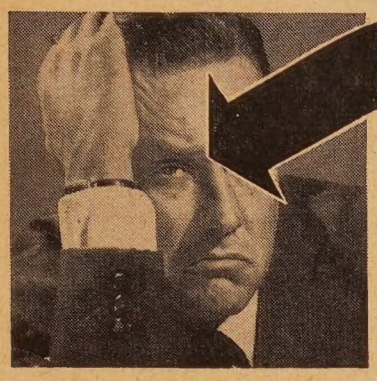

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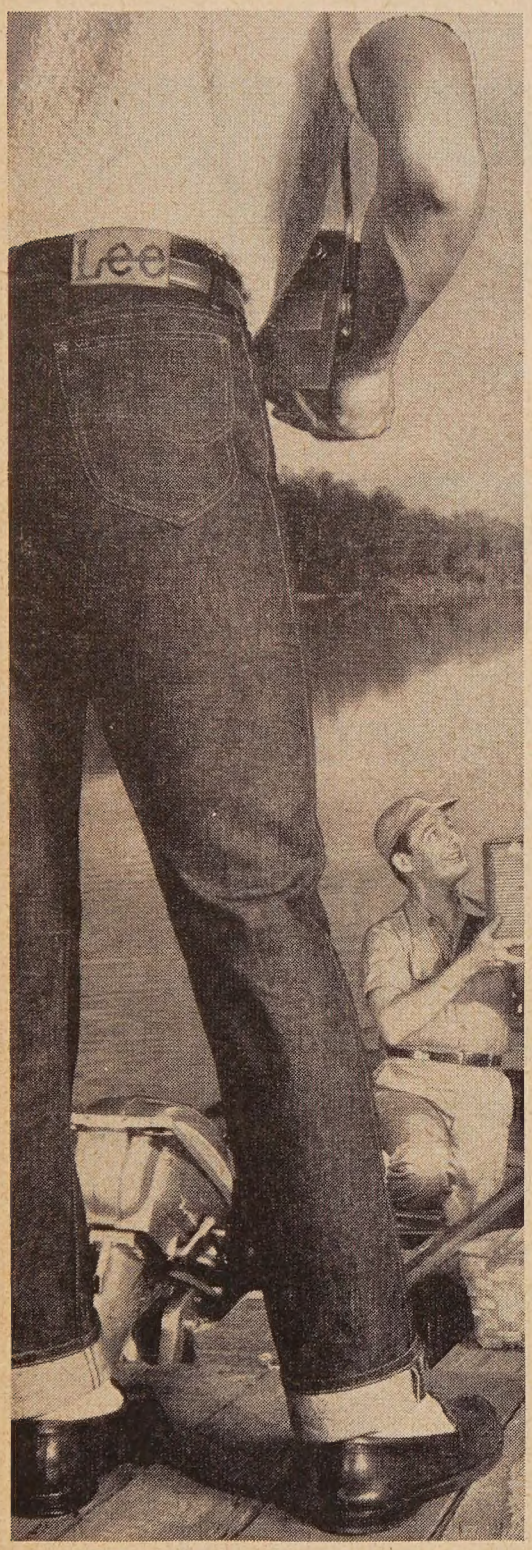

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RAILROAD MAGAZINE

The Magazine of Adventurous Railroading—Founded 1906

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207 MILES AN HOUR

World's Train-Speed Championship Held by French National Railroads with Electric Locomotive BB 9004

MEET the new champ! French National Railroads have again broken the world's train-record speed. The BB 9004, pulling three passenger cars, turned the mileposts into a picket fence last March 29 by scoring 207 miles an hour. This is much faster than the earliest airplanes flew.

The test runs were made on a 40-mile stretch of straight track in southeastern France between Bordeaux and Dax, where a direct current system of electrification at 1500 volts has been in use since 1927. It was felt that this "racetrack" would allow enough distance for acceleration to high speed and for braking. It is not considered safe to apply brakes while traveling above 125 miles per hour.

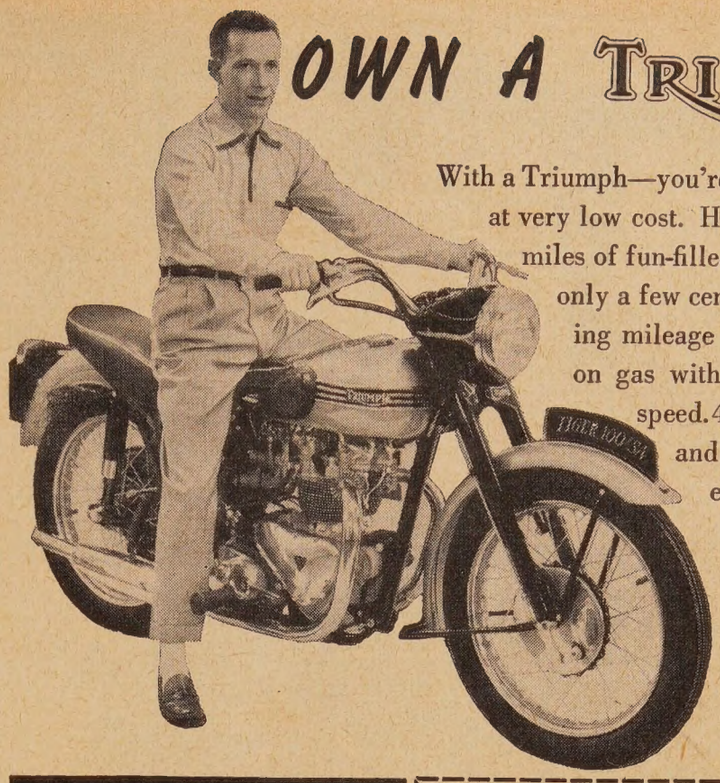
No special brakes were designed for the tests. Instead, technicians decided that windows should be opened at the proper moment to create a drag. That was done. It slowed down the train to a safe braking speed.

Passengers enjoyed a smooth, comfortable ride. Sightseeing, however, was not in order, because speed blurred the passing scenery. Even telegraph poles faded out. The faces of trackside onlookers were total blanks. Gravel flew up as high as the windows.

On the previous day another great French electric locomotive, the CC 7107, on the same track, had stepped through the dew at 198 mph. This feat easily topped the magnificent world record that the French CC 7121 had set on February 21 last year, 151.6 mph. Spectators howled with joy. Everyone is asking, "What will *next* year's record show?"

Only a bold guess could answer that

OWN A TRIUMPH®



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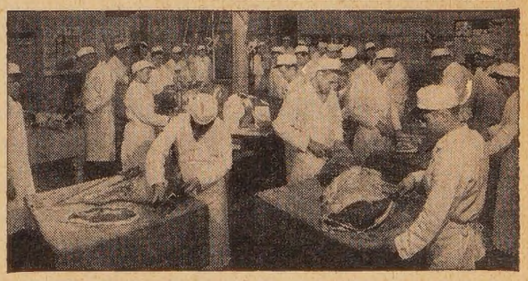

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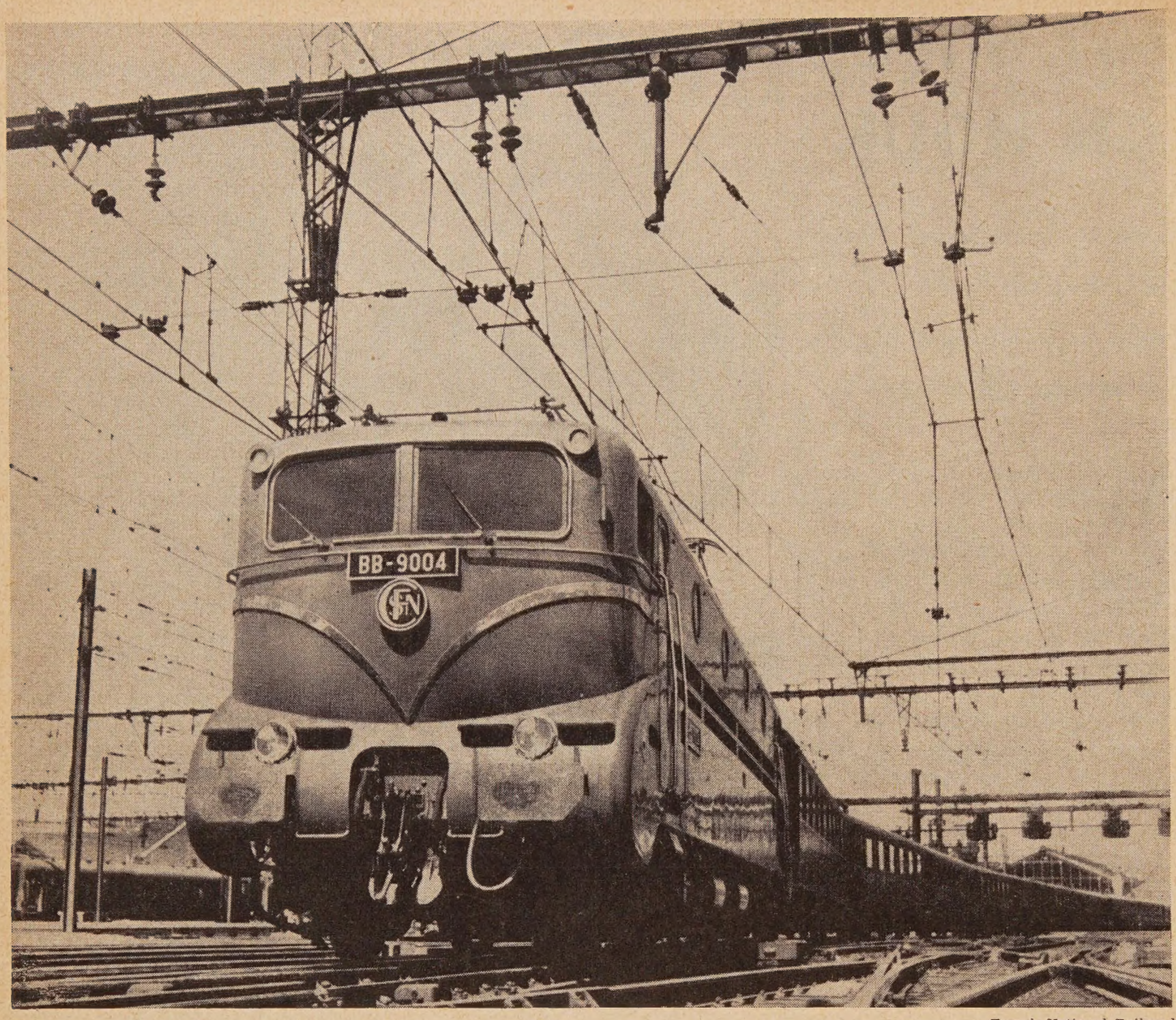


French National Railroads

Electric-powered locomotive is back in regular service after breaking the world's speed record near Bordeaux in France.

question. The railroad industry has gained a lot of prestige from French achievement.

Both of the 1955 speed kings have been in regular service. The CC 7107, built by the Societe Alsthom, has two six-wheel trucks, weighs 107 tons, and regularly wheels the streamliner *Mistral* between Paris and Lyon at an average of 76 mph.

The BB 9004 was built by the group cooperation of Grausot, Schneider-Westinghouse, and Jaumont. She has two four-wheel trucks, weighs 83 tons, and has about 300 horsepower less than the CC 7107. She is a prototype of the latest design developed by the French to serve their 1500-volt DC lines for high-speed runs. Forty of these locomotives are now under construction.

Since the lighter BB 9004 cost about 25 percent less to build than the CC 7000 series, the French were eager to compare her with the very successful CC 7000's. In preparing for the test runs, they modified the locomotive gears slightly and installed solid wheels to avoid the effects of centrifugal force and braking on ordinary tires.

Safety measures preceding the runs included complete shop tests of all moving parts, which were made to revolve at a speed simulating 260 mph in actual operation.

French technicians estimated the locomotive would develop about 10,000 horsepower at 185 mph. They designed a special pantograph capable of absorbing 4000 amperes of current at high speed. All seats were removed from the first of the three cars attached to the locomotive to make space for the vast array of instruments and equipment used to measure speed effects on train and track.

The train carried a piezo-electric quartz accelerometer to test stability and lateral strain, registered on cathodic oscillographs. Also precision instruments to measure speed, time, and electric tension.

A periscope let the engineers see that the pantograph was in constant contact with the catenary. Soon after the new champ hit 198 mph, trouble developed in the rear pantograph from heat and friction. Despite the high speed, Engineer Brachet lowered the damaged collector and raised the front pantograph. This daring feat succeeded. Speed zoomed to 207. ●

MAIL CAR

Running Orders, Waybills, and Sandhouse Gossip—from Railroaders, Fans, and the Editorial Crew

FRONT COVER scene was made at Portneuf, Quebec, by Nicholas Morant, Canadian Pacific staff photographer, from the tender of the CPR way freight shown at the left. Speeding toward you is the Montreal-Quebec afternoon express. The photo is no chance shot. Like most of Morant's pictures, it was skillfully planned. The camera rested on a small temporary framework built out from the tender's side, after a division engineer had measured the clearances. •

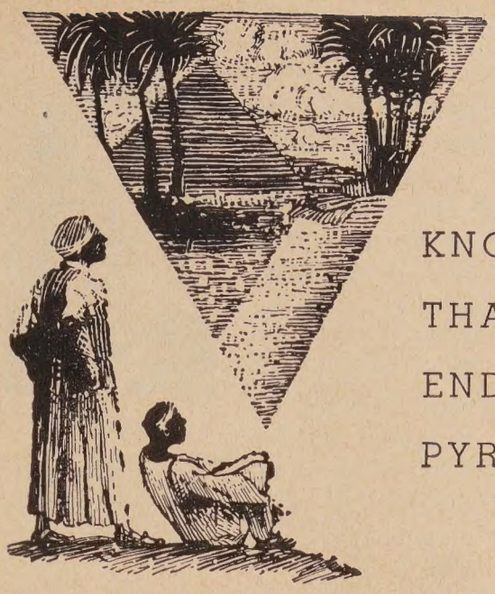
AS WE GO into bimonthly publication for the first time in *Railroad's* long history, skipping a July issue, many new and old readers are sending us expressions of loyalty. This is gratifying. Lack of space keeps us from printing such letters but we quote from one written by the Rev. E. J. Morgan, pastor of the Handley Memorial Presbyterian Church, Birmingham, Ala.

"Railroads are my only hobby," he states. "The very thought of waiting two months for a new issue of your magazine fills me with dismay."

Some of our well-wishers are backing up their comments with checks. A Baldwin, N. Y., woman has ordered *two* subscriptions to run concurrently. She wants her soldier-son to get *Railroad Magazine* in Korea and at the same time she is keeping his files up to date at home. A Canadian, Keith Pratt of Prince Edward Island, besides taking *Railroad* himself, has sent in a separate subscription for a pen pal in England.

These are but three samples from the flood of encouraging mail that greeted the "Yellow Light" announcement in our May and June issues. •

STEWART HOLBROOK, author of several best-sellers, including *The Story of American Railroads* (Crown Publishers, New York), made his *Railroad Magazine* debut last February with "James J. Hill's Great Adventure." Holbrook spent some of his best years as a lumberjack. For that reason and because his Hill article drew much



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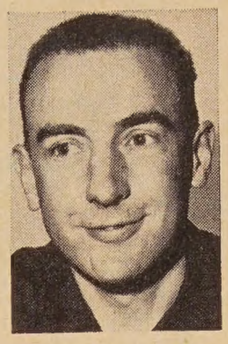
praise, we asked him to do a piece on the logging power he used to work with.



Al McCready

Holbrook got together with Al McCready, associate editor and editorial writer for the Portland *Oregonian*. The result is "Engine Smoke in the Big Woods." Many readers have been wanting information on the Shay, Heisler, and Climax geared locomotives that hauled the giant toothpicks before the diesels took over. Well, here it is.

"My earliest railroad memory centers around a logging road, the Valley & Siletz, that cut across an uncle's farm on which I spent my summers as a small boy," McCready tells us. "Another uncle was a hogger on the V&S passenger train. Every morning at the farm I would make a pilgrimage down to the fence-row to wave at him. The line ran between Independence and Valsette, Ore. It is still operating—freight only.

"My rail career began in 1937 when I hired out as an apprentice carman in the Union Pacific's Albina shops at Portland. It ended suddenly, not long afterward, when a red-hot rivet fell down the open neck of my jumper. I am now 36, married, with three daughters. My hobby is collecting switchmen's and trainmen's lanterns." •

Bill Parry

FAST RUNS of William J. Parry, now retired, during his 40 years of engine service on the Canadian Pacific and Canadian National earned him the nickname "Airplane Bill." Parry lives on Belle River, R. R. 1, Ont., Canada, and is also a fiction writer. Among the magazines which have published his stories are *Railroad* and the *Canadian National Magazine*.

"But," he states, "I have never made a run comparable to some of those I've read about in fiction, in which the hero ignores the book of rules and gets away with it. An author is not convincing unless he has lived through the kinds of experiences he describes. When I wrote stories I took my material from real life. I remember, for example, plowing through the tail end of a standing freight, with the engine derailed and rocking like a ship in a heavy sea and boxcars toppling all around the cab.

"On another occasion, when I was handling a passenger engine at 80 miles an hour, the valve motion snapped, and the minutes seemed like years before I could bring the train to a shuddering stop. You can't expect telegraph operators, brakemen, and writers from other branches of railroad service to know what passes through an engineer's mind when he faces such crises; and that, I think, is where some of your fiction fell down."

You may be right, Bill. On the other hand, a brakeman with plenty of experience in riding the head end and with some writing ability could describe an engine-cab crisis with a fair degree of accuracy. A veteran brass pounder also has had his moments of tension. So have other railroaders. The basic emotions—fear, joy, sorrow, etc.—have a lot in common, no matter where you find them.

Meanwhile, we are being bombarded by one group of readers urging us to "publish more than one fiction story per issue" and another group demanding that we cut out all fiction. If you were the editor, what would *you* do? •

DONALD SIMS, 16737 Nordhoff, Sepulveda, Calif., author of "Key to the Bay" in this issue, has worked for three Class 1 roads.

"First, the Southern Pacific," he says, "eight months in 1949 as a carmen helper in the Mission Road coach yard, Los Angeles. Next the Burlington in 1950 as a locomotive fireman on the Terminal Division in and around St. Louis—all yard and interchange, no main-line stuff. My firing was mostly riding in diesel cabs, but about twice a week I hand-fired an old 0-6-0 steamer. My last railroad job was that of a Santa Fe mudhop in Los Angeles one summer." •

57 MILES of the Pacific Great Eastern extension north of Prince George, B. C., Canada, should be in operation by June, 1956, provincial Premier Bennett announces. "The final location from this point north," he says, "is proceeding toward early completion." Last year the PGE piled up $265,055 operating surplus, which augurs well for the road's future. •

Roberta K. Anthis, railfanette

MISS *RAILROAD MAGAZINE* for July-August is 19-year-old Roberta K. Anthis, 510 E. Kingsbury, Springfield, Mo. Besides being the daughter of R. K. Anthis, general chairman, Order of Railroad Telegraphers, Frisco System Division 32, the comely Roberta has done a little railroading on her own by clerking for the Frisco during the summer of 1953. Now at A. & M. College in Stillwater, Okla., majoring in secretarial administration, she expects to graduate this June and probably go back to railroading.

"It was exciting," she tells us, "to learn the Morse code and receive my first wire message. I remember, too, one day when I was a high-school sophomore. A friendly engineer invited me to climb into his cab. Eagerly I did so. The conductor swung a highball, I yanked the whistle cord, and we were off—for a thrilling ride of one block!"

Roberta's father became a railroader in 1913, hiring out to the Big Four at age 15. He recalls: "I made a deal with Levi Grace, the Big Four agent at Kennsburg, Ill., my native town, and his brother Harmon, the third-trick operator there, to teach me brass pounding and station routine in return for my doing odd jobs around the depot. It was a tough grind. For six months I toiled daily from 6 a.m. to 10 p.m.

"At the end of that time the Big Four examined and hired me, and I stayed with them until January, 1915. Then an uncle of mine who was a passenger brakeman on the Katy got me interested in his road. Visiting the M-K-T chief dispatcher at Oklahoma City, I asked, 'Could you use a good telegrapher?' Well, he looked at me sort of funny, on account of my youth, but he gave me the examination papers to fill out.

"Passing the exam, I was sent to Norfolk, Okla., an oil boom town. I arrived there while the oil workers were on strike. It was my first experience away from home. The town had sprung up almost overnight—a motley collection of gambling dens, pool halls, and what-have-you—nearly all tents. Norfolk was so tough that I never sold tickets there at night but kept my office door locked after sundown.

"Roughnecks slept on my waiting-room floor. I got along with the men all right by telling them I didn't care how many of them lay on the floor so long as they left space for me to walk through the waiting room and deliver train orders. I stayed there nine months. During that time I saw fights and riots, and one man shot, and a non-union worker was drowned in a huge 55,000-gallon tank of crude oil. One night a stranger beat on my office door, with blood streaming down his face, and begged me to let him in. I did so. He said that strikers had beaten his face with the butt of his own gun.

"Later I worked for the Santa Fe at Tulsa, Okla., and in 1919 I hired out to the Frisco, which road I have been with ever since. I'll never forget the time I barely averted a collision when I was working as agent-telegrapher at Keystone, Okla. I had a 31 order for an eastbound train, authorizing it to meet a westbound train at Keystone. Of course, my board was in red position. When the eastbound showed up it was required to stop, but its engine and a few cars sailed right past at high speed. I thought the crew hadn't noticed the red and weren't going to stop. So I ran out to the train, pointing to my red board and giving a washout.

"The conductor, standing in the caboose doorway, caught my signal and pulled the air. Well, they backed up to the station just in time. The westbound extra was already rounding the curve in plain sight. I don't like to think how close those two trains came to colliding head-on.

"On another occasion, when I was working as agent-op at Thomas, Okla., a blizzard set in on a Thursday afternoon and kept up, lashed by a howling wind, until the following Saturday. A snowplow with an engine and a caboose

(Continued on page 11)

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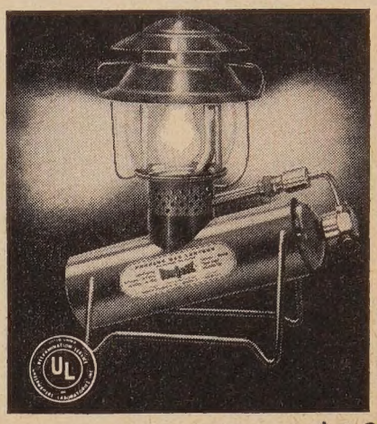

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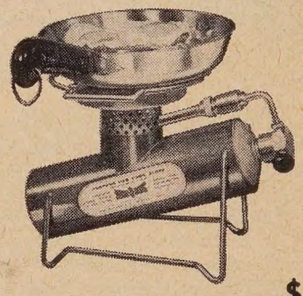

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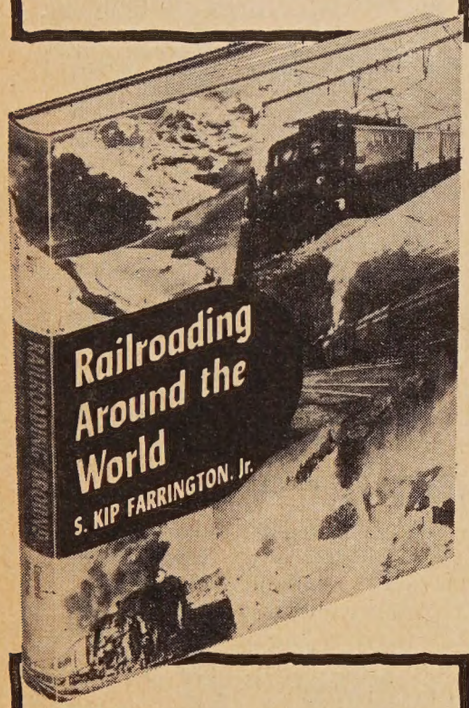

This strikingly beautiful book presents a panorama of railroading the world over — in 200 wonderful photographs and absorbing text, plus charts, signals, graphs, rule books, a U. S.-English glossary of railroad terms and a Spanish-English railroad dictionary. The nation's foremost writer on railroads, Mr. Farrington, collected the photographs while personally inspecting the operations of the roads. Included are the finest snow pictures ever taken and many steam locomotive shots for lovers of that form of motive power. Here are first-hand accounts of the conditions and many problems met and solved on each of the 34 roads, the equipment used, etc., RAILROADING AROUND THE WORLD will be a revelation — and a permanent treasure — for every railroad man and rail enthusiast.

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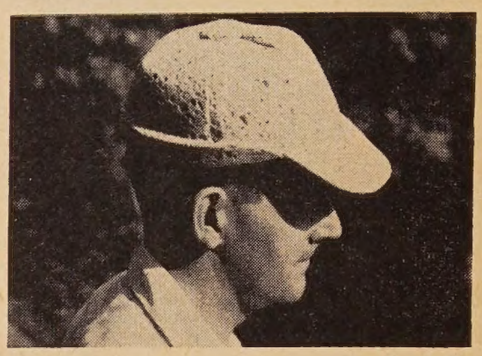
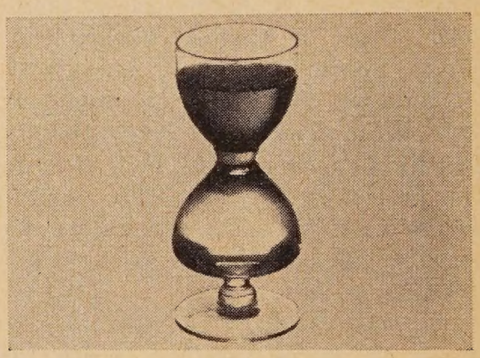
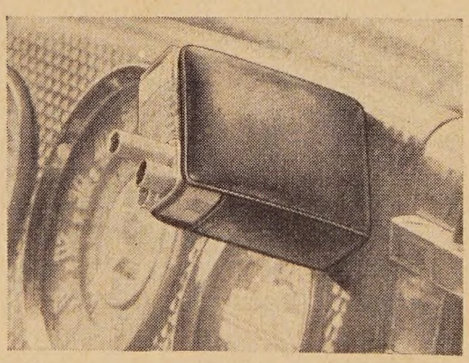


Yes, you're right. The man is wearing a sponge-rubber cap—and he's not ready for a strait jacket, either. Du Pont came up with this idea, and it works this way: wet down the hat and it will retain its coolness and moisture for hours, make it cooler and more comfortable when you go fishing on a hot day. Specify size. $1.95 ppd. Lewis & Conger, 45th St. & 6th Ave., N.Y.

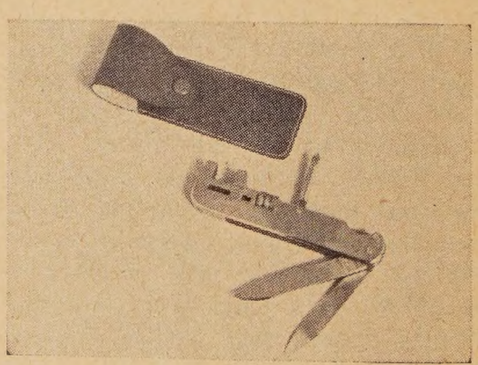
Pair of boots you're looking at are made specially for anybody who spends a good part of the day on his feet. They have cushion foot construction with built-in arch support, special neo-cord non-slip heels and soles. Made of top quality reverse cowhide, they're scuff-proof, don't need polishing. Tan, sizes 7-12, A to E. $14.75 ppd. Thompson, 5095 S. W. Barnes, Portland, Ore.



This little gizmo takes the prize for being the most ridiculous thing we've seen in a long while. It's a combination whiskey and chaser goblet, no less, that keeps chaser at bottom from mixing with hooch in top part. Capillary action, the manufacturer says, causes this remarkable thing. $1 each; 6 for $5; 12 for $9 ppd. Gibson & Chase, 315 Fifth, New York.



Why bother fumbling around for a cigarette while you're driving when this case will hold your favorite butts within easy reach on your dash? Magnet in bottom does the trick. Case is made in Germany of top-grade calfskin, comes in two sizes—for regular or king size cigarettes. Specify your choice. $1.95 ppd. from Hoffritz, 49 East 34th St., New York, N.Y.

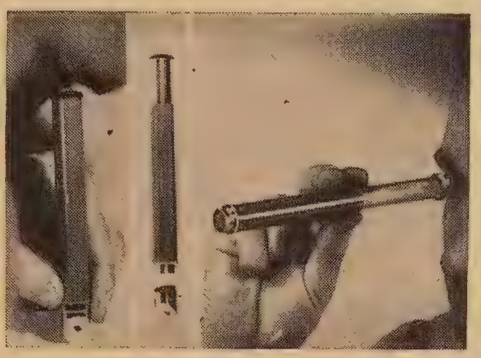


These wrench-knife tools have been around before, but the price of this one makes it a good buy. Wrench head opens to $\frac{5}{8}$", unit is $4\frac{1}{2}$" long. Includes regular and split-head type screwdrivers and a file in addition to knife. All are chrome-plated steel. Comes with leather case for $5 ppd. from Colen Cutlery, 209 West 7th St., Wilmington 1, Del.

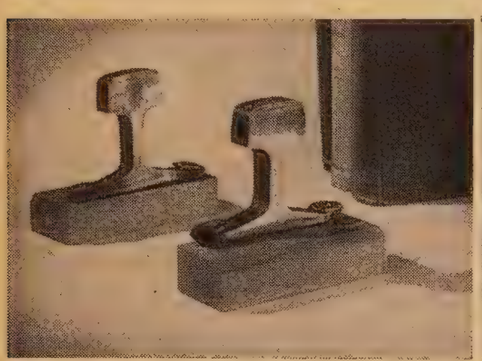
SHOP BY MAIL

All products shown here may be obtained directly from indicated sources. Send check or money order with your order. Manufacturer will refund full purchase price on prompt return of unused, non-personalized items. This department is not composed of paid advertising.

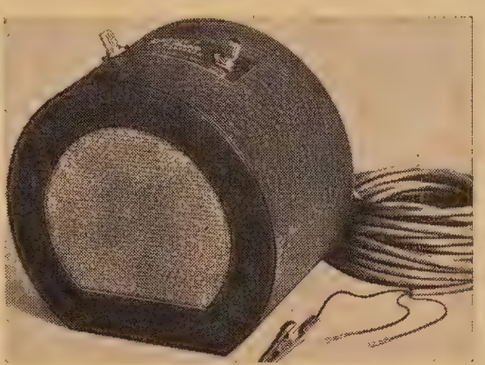
If you smoke a pipe, here's an unusual rack for your collection that Korey's, Box 52, Jackson Heights, New York, N.Y., will send your way for $5.95 ppd. A copy of the sturdy Vermont pine maple sugar buckets, it's been cut down to hold seven of your favorite briars, and a half-pound humidor. The bucket has an antique brown hand-rubbed finish.



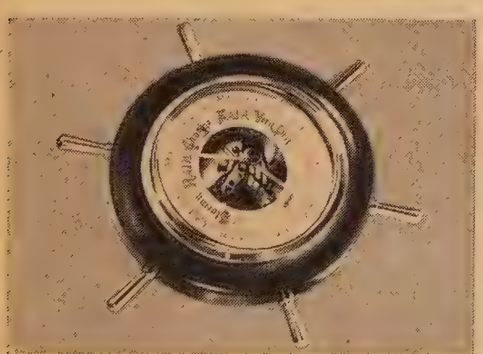
No bigger than a fountain pen, but plenty powerful is this new precision-made pocket microscope-telescope. Handy for sports, looking at rare objects, just plain snooping. Telescope magnifies 10-power with a wide, brilliant field. Microscope is 50-power. Focus sharp at any range; a real optical instrument, not a toy. $4.95 ppd. Prince Enterprises, 103 Park Ave., N.Y.



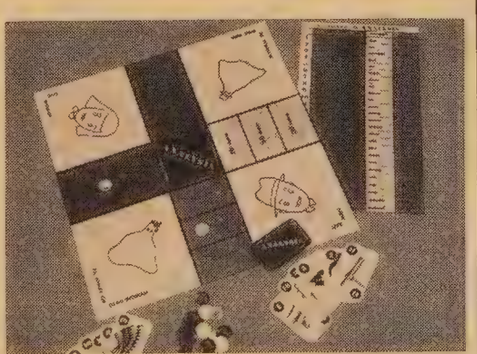
For railroad fans—a unique set of bookends made from 2 slices of narrow-gauge rail from the old Colorado South Park Railroad. Nicely mounted on finished oak blocks (which resemble ties), outside of rails are highly polished. The original spikes are welded on to the rail, then the unit is mounted. A mighty nice bit of nostalgia. $3.95 ppd. KZ Ranch, Pine, Colo.



New "Private Sound" remote speaker is a handy unit for any TV, radio or phonograph fan to have. Beauty of this speaker is that it has dual volume controls—one for speaker at set, another for it. Has a 25-ft. cord and can be used by your chair, bed, in the workshop, etc. Gives a stereophonic effect; easy to hook up. $9.95 ppd. from Zephyr Prod., 419 Oak, Kansas City, Mo.



A good buy in a barometer for your desk or den, this precision-made German import is shaped like a ship's wheel, has outside recording dial, open face that shows sensitive movement. Measures 8" across, has chrome spokes and bezel, mahogany-finished case with back stand and wall hole. $8.95 ppd. from Johnathan Pike, Y.D. Highway, Peabody 12, Mass.



One of the better new quiz games, this one is called Analysis, and it works thusly: One player has 25 cards, with 'em has to outline a personality by placing cards on different categories on the board. The longer it takes the other people playing (any number) to guess who it is, the more points the player earns. $2.95 ppd. Stuart Hoover Co., Rowayton, Conn.

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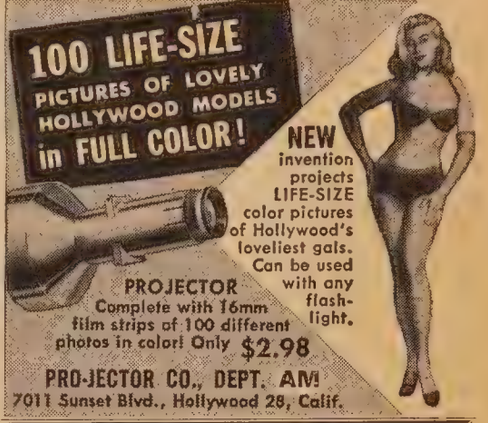

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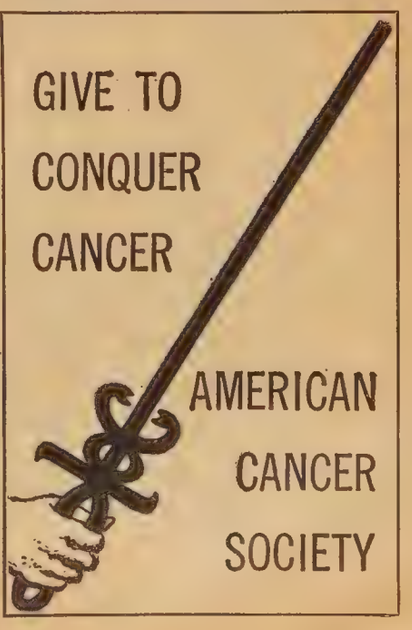

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But if the nation is to have the full benefit of these advantages, the railroads should have greater freedom to adjust their rates and services promptly – greater freedom to compete with other forms of transportation on an equal basis.

Association of American Railroads

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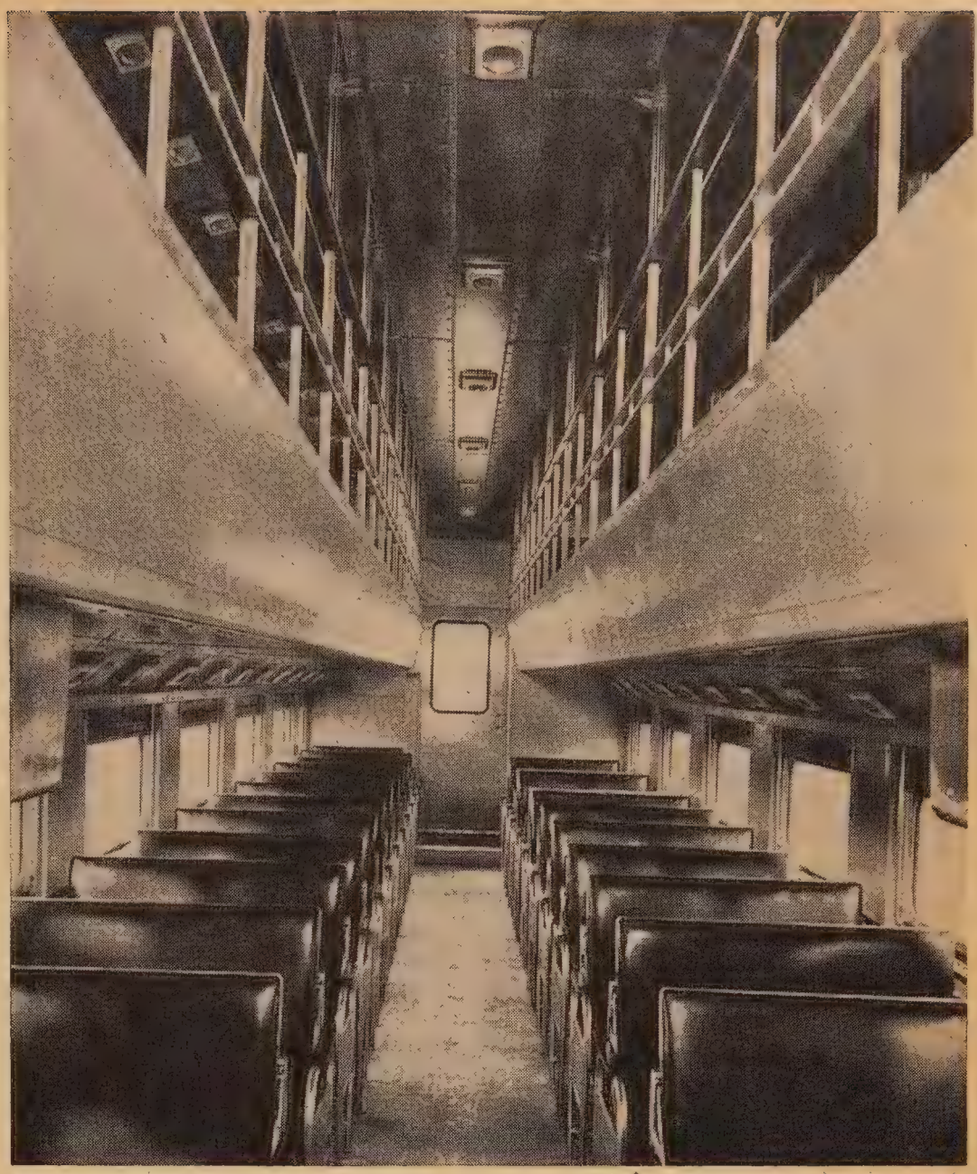
that tried to open the line was stopped dead at my station. The big cut to the south was filled with wet closely-packed snow. I warned the train crew that I didn't think they could get through, but they tried it anyhow, heading south at about noon. Five hours later they phoned me to say they were stuck in the cut. I informed the dispatcher. Next day he sent two more engines down there with several section men, and they finally got the snow-train out."

These are some of the experiences that turned a raw kid into a seasoned lightning slinger—and an ORT general chairman. Young Roberta has a long way to go to catch up with "the old man." •

SPEEDING UP Montreal-Halifax passenger schedules, the Canadian National has just cut two hours and 20 minutes from the running time of its *Ocean Limited* on the 840-mile route, also 110 minutes on *The Scotian* westbound and 100 minutes eastbound. The new schedules follow a study of operating performance of *The Ocean* since it was dieselized last fall. Officials found that a substantial saving could be made on the running time of the *Ocean Limited* and *The Scotian* by replacing their steam power with diesels. The gallant *Maritime Express,* however, continues to roll between Halifax and Montreal under the old banner—a long, beautiful, white smoke plume. •

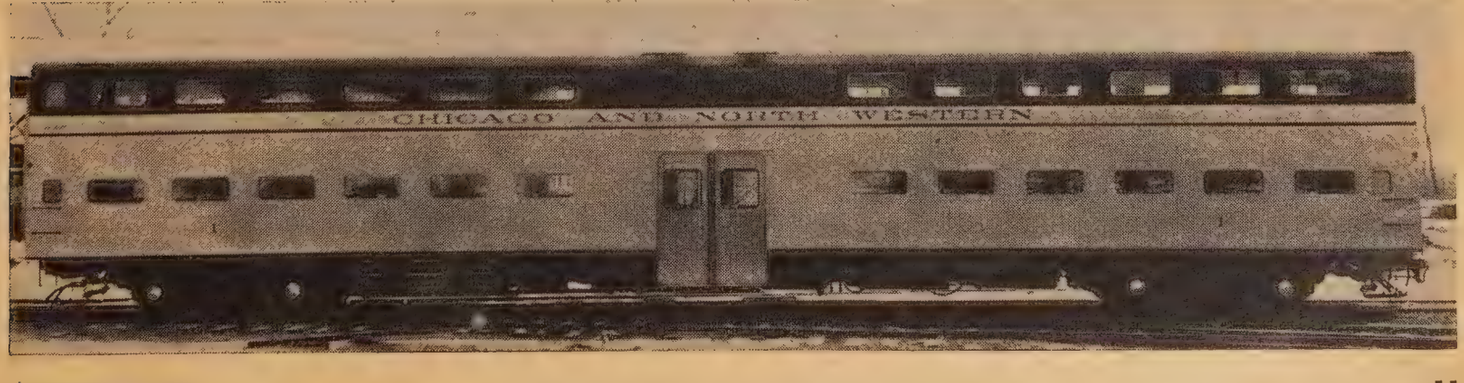
FREE, on a loan basis to schools, churches, clubs, etc., is the new movie, *Big Trains Rolling,* produced by the Association of American Railroads, Transportation Bldg., Washington 6, D. C. It is a 16 mm. film in sound and Kodachrome. Show time, 25 minutes. The story centers around an overnight train trip made by two youngsters. •

WILLIAM M. RITTASE, the Philadelphia photographer whose work we featured in April, comments: "I hadn't seen a copy of *Railroad* in years, but I read the April issue from cover to cover, learned much I hadn't known about railroading, and was surprised to find how interesting you made the subject. Morant's cover photo has all the earmarks of a well-planned camera location and is beautifully reproduced. As for my own shots in the April issue, I smiled at getting letters from some of your readers requesting free prints." •



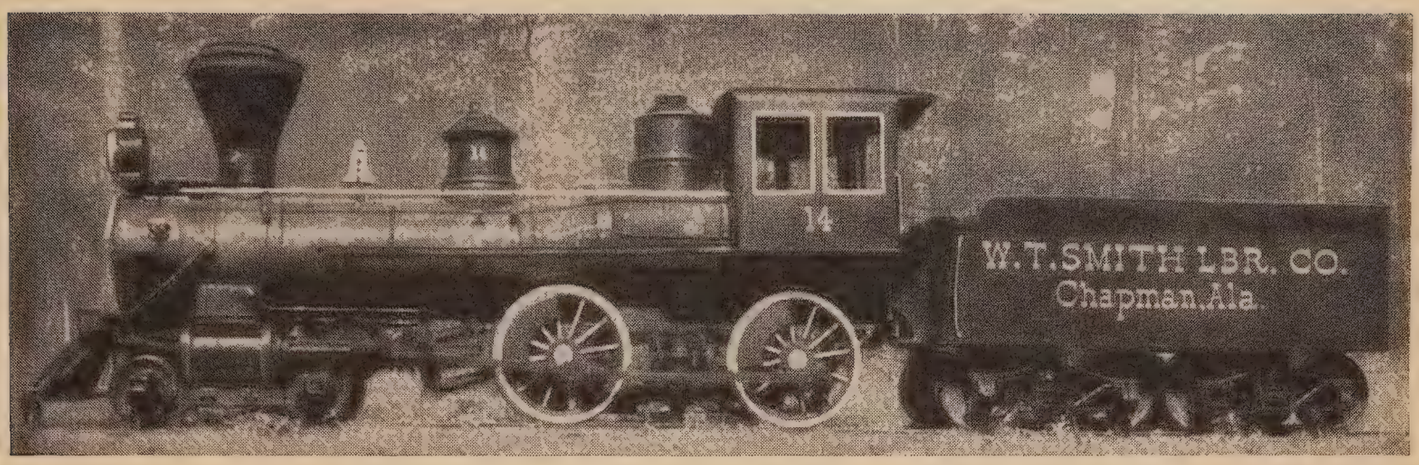
Chicago & North Western is putting into suburban service 16 gleaming, new, streamlined, air-conditioned double-deckers. (Interior shown above, exterior below.) Each gallery-type car seats 169 passengers—the world's greatest seating capacity of any railroad equipment! These cars, 15 feet 10 inches high, are built by St. Louis Car Company at a cost of about $143,000 apiece.

SO LONG as your magazine tells about the palmy days of steam power and the Morse code we will continue to buy it," says B. L. Stickles, 564 Foresale Ave., Toledo, O., speaking for a group of Wabash Railroad telegraphers. *(Continued on page 71)*



Albert Farrow

Engine smoke billows over the tall whispering pines of the Pacific Northwest, as a Deep River Logging Company 2-4-4-2 locomotive, No. 7, hauls a long drag out of the woods near Deep River, Wash., near the Columbia River.



Joseph P. Sadler

An old lumber company once used this retired diamond-stacked American type for advertising purposes.

ENGINE SMOKE IN THE BIG WOODS

For Eighty Years or More the Shays and Other Steam Workhorses Have Been Hauling the Logs out of America's Forests

by STEWART HOLBROOK
WITH AL McCREADY

HIGH in the dripping fir forest of Oregon's Cascade range, one December day in 1915, woods boss La Sells Stewart stood on a log, walking up and down, his boot caulks clicking in the thick bark. Though commonly a calm man, he was fidgety this morning. The work was going well enough. He could tell that by the steady whiz-whooz of crosscut saws broken now and then by a mighty ripping noise, the whish of boughs in the air, then the solid thud of a 200-foot giant coming to earth.

But the bull of the woods was nervous. Suddenly, from far down the canyon, there came the long hoarse cry of the company's Shay. The man on the log went taut, listening. Then, before the locomotive whistle died in echo, came a series of complicated toots. Woods boss Stewart relaxed. He let go a wild whoop, tossed his hat into the air, and leaped from the log. The prearranged signal told him that a brand new son had joined the Stewart clan.

Forty years later, the youngster born that day, Faye Stewart, is an official

Press Association, Inc.

When timber around Shevlin, Ore., runs out, Shevlin-Hixon Lumber Co. puts town on flatcars, moves its 350 houses and 600 inhabitants to new site, miles away.

of the Bohemia Lumber company in Oregon's timber-rich Row river valley. The Shay that heralded his arrival, along with almost all other logging locomotives, has gone to join the bullteams which they in turn had displaced so long ago. Yet there still remains among middle-aged loggers a strong bond of affection and admiration for that mechanical Paul Bunyan of yesterday, the geared locomotive.

If the New York Central's famous old "999" was the racing thoroughbred, then the clanking, wheezing Shay was the Percheron of steam locomotives. She was short on speed and beauty, but she had plenty of stamina and brawn. When it came to buckling down and taking a heavy load up a steep grade, there was nothing quite comparable.

Like so many good things, the geared locomotive was born of a sudden need back in the 1870's, a time when logging was done in the winter with horse-drawn sleighs over roads that were ice from nightly sprinkling. In those days, an open winter of no snow was a disaster to logging operators; loggers could not get their logs to the mill, and bankruptcy often faced them from among the stumps.

It was just such a predicament that faced Ephraim Shay, the bearded genius who revolutionized the technique of log hauling, one winter in the late seventies. His clearings were strewn with as fine white pine logs as ever grew in Michigan, waiting for snow that never came, and the sawmill at Cadillac had nothing to work on. Shay was no man to bow to disaster, and he swore that he would no longer depend on nature for a logging track. He knew, of course, that a railroad would do the job; and he knew just as well that the cost of a conventional track and rolling stock was prohibitive. And that a standard locomotive, with its rigid frame and side-rod propulsion, could not operate successfully on rough track with sharp curves and steep hills. Not that it hadn't been tried. When sawmills first got the idea of logging by railroad, the only engines available were retired common-carrier locomotives, and so, for a while, you might have seen an old, high-wheeled 4-4-0 hauling logs out of the woods. But they "wouldn't pull a settin' hen off her nest." Their steam pressure was low, their tractive effort was worse than nothing, and they slipped like a doe on ice.

The locomotive Shay wanted would be a different sort—flexible enough to accommodate itself to the tightest curves and the roughest track, and with enough power to haul a trainload of logs up fairly steep hills. Since there was no such engine, he decided to design and build one.

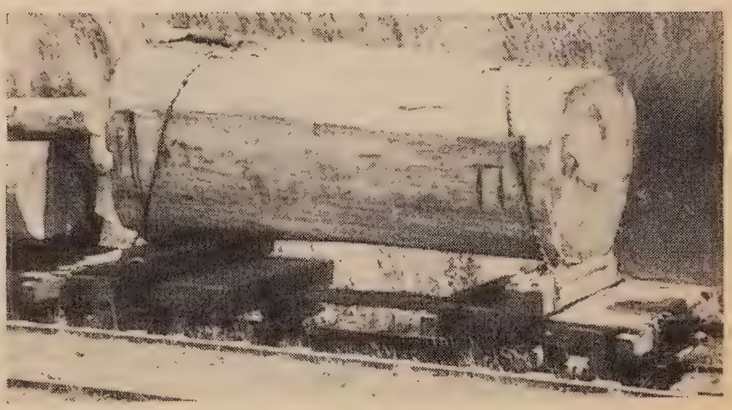
The first Shay would remind present generations of some of the wildest dreams of cartoonist Rube Goldberg. The inventor started with an ordinary flatcar. On it he mounted an upright threshing machine boiler. His driving power came from bevel gears on a shaft which meshed with ring gears on the outside faces of the wheels. Cadillac's townspeople scoffed at what almost inevitably they called "Shay's Folly." But it worked. It hauled his logs out of the woods on jerry-built wooden tracks.

Not content with his first model, Shay went on to build another with universal joints and flexible sleeve couplings which allowed the trucks to swivel freely on the sharpest curves and equalized the load on their wheels. The Lima Locomotive Works of Lima, Ohio, showed immediate interest and purchased Shay's patents for $10,000. The Lima people tried to get Shay to take stock. He didn't want any stock. He took the $10,000 cash. Within two years the Lima company had netted $750,000 from building Shay locomotives. He didn't mind. He was happy that the versatility of his engine was speedily recognized, and long before his death, Shays were busy in the logging woods all over the United States. That was enough.

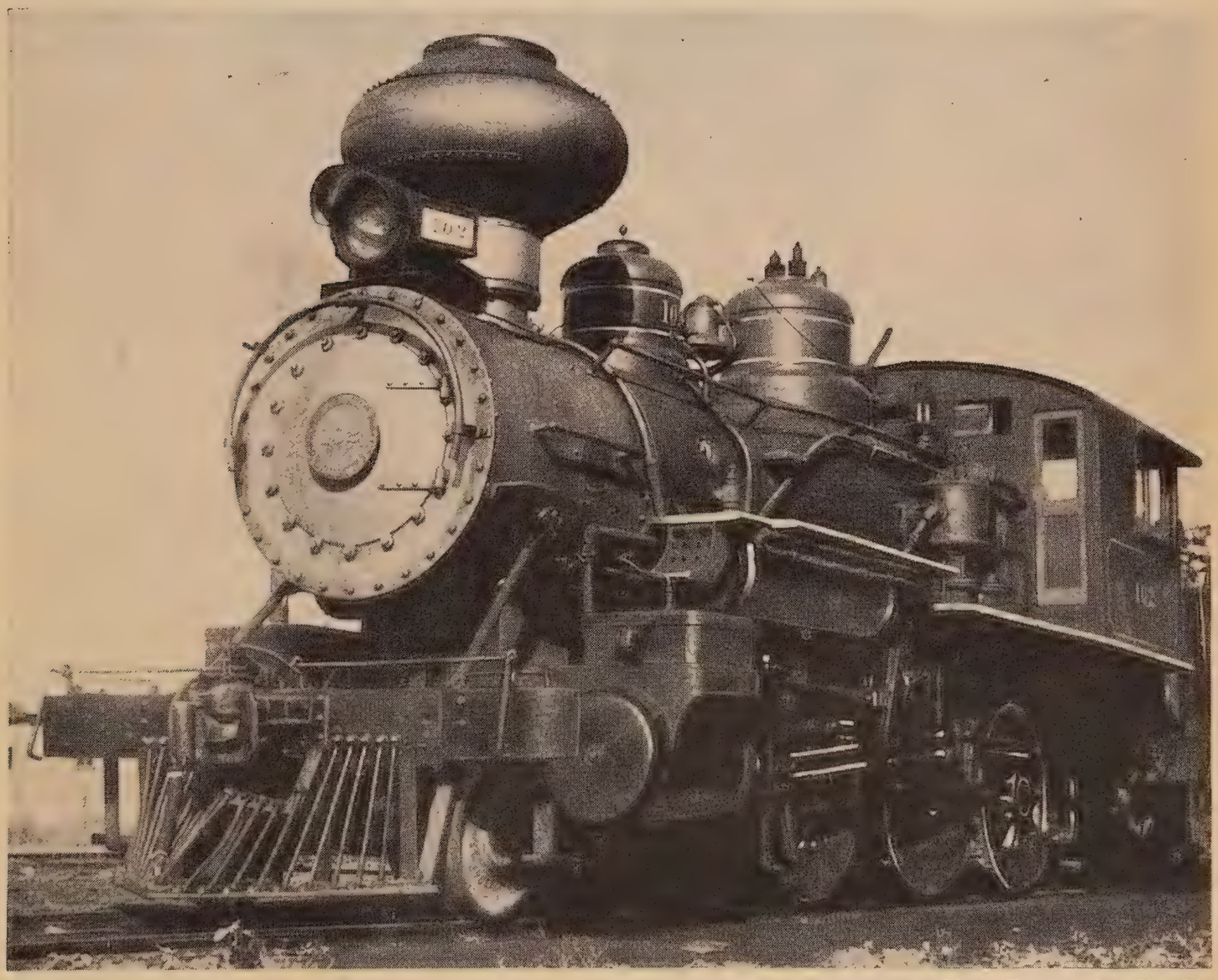
Unlike so many inventors, Shay was most likable. "Ephraim Shay was an all around grand person," recalls George A. Newark of Harbor Springs, near Cadillac, who came to know the old gentleman in his latter days. Born in 1839 in Ohio, Shay lived seventy-seven years, dying in Harbor Springs in 1916. A few of the early Shays, Mr. Newark says, were built right in Cadillac by the Michigan Iron Works.

"Mr. Shay didn't stop with locomo-

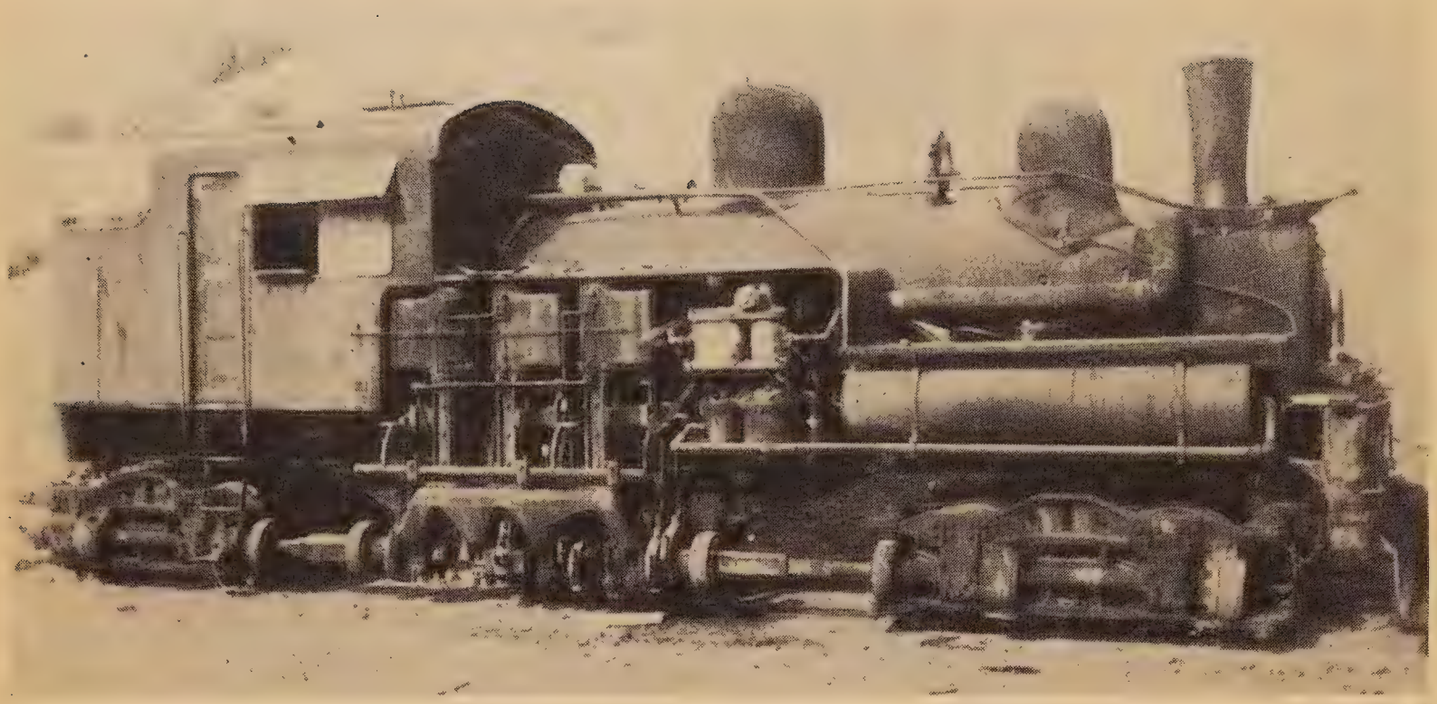
Cattleguards like this one in the big woods used to keep animals from wandering into the path of logging engines.



Typical car on oldtime logging roads consisted of a pair of trucks coupled with heavy beam. Air brakes were unknown.



One of the last wood-burning engines to run in America was this sturdy, cabbage-stacked Baldwin Ten-wheeler, No. 102, on the log-hauling Live Oak, Perry & Gulf. Diesels now work on this 49-mile Florida line, and the state's once-great logging industry is today almost extinct. A sister engine, No. 5, still hauls lumber in Brooks-Scanlon yards at Foley.



B. H. Campbell

First and most numerous of the geared engines, the Shay is also the most outlandish-looking. Each right-hand wheel is geared to driveshaft. Boiler is off-center, and engine can bend in middle. This one belonged to Hines Lumber Co.

James E. Boynton

Heislers gear only one axle per truck to driveshaft, power others with side rods. Boiler is centered. The cylinders, at right angles to boiler, incline downward toward shaft beneath. Above, Swayne Lumber Co.'s No. 5 at Oroville, Calif., in 1937.

tives," says Mr. Newark. "Just to keep up with the times, he built an automobile, a one-cylinder car that could run some three miles an hour. He also built a gasoline speeder he called The June Bug. He also designed and built a sheet-steel boat. Nothing came of these things. He got all the satisfaction he wanted from having made them." The old inventor loved children and liked to make miniature logging sleighs for them. "They were perfect to the smallest detail," Mr. Newark remembers. "Even to chains and runners of metal. They usually came in bob-sled style. He made and gave away some five hundred pairs to kids in Harbor Springs. Some of them are to be found in attics and parlors today."

THE GREAT SUCCESS of the Shay prompted development of two rival geared locomotives, the Climax and the Heisler. Geared locomotives attained the peak of their popularity in the 1920's, and in 1927 no less than 825 of them were in use in West Coast logging operations alone. Then came the crawler tractors and powerful trucks, and the sun began to set on railroad logging. No more geared engines are being built. The last Lima Shay, serial number 3354, came out of the factory in April, 1945. It now has a place of honor in the Baltimore & Ohio railroad's Museum of Transportation.

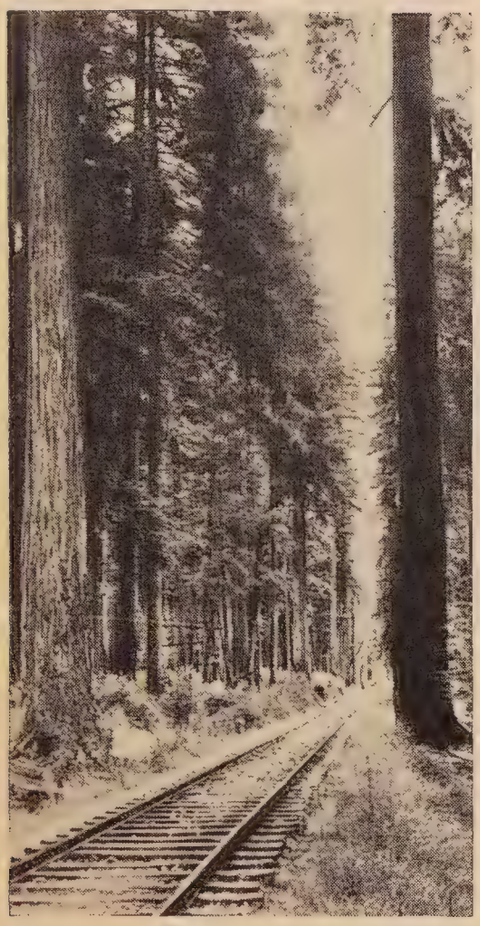
The Shay was the first and most numerous of the geared engines, and it was also the most outlandish in appearance and action. Hearing one approaching around a hidden bend, one might judge it best to take to the brush. The sound was terrific, and it had no relation to its leisurely ten to fifteen miles an hour. But its exhaust through the stack, sixteen times for each turn of the drivers, or four times as often as those on a rod engine, made for high commotion. When it came into view, first to catch the eye was the row of cylinders hanging on the right side of the boiler, with piston rods and cranks frantically flailing, turning a long horizontal and joined driveshaft running from the pilot to the hind end of the tender. Many of these early Shays were woodburners, and you loaded up the tender in the morning with pine knots from a pile beside the track, and, when you wanted water, you sucked it out of ditches with a steam syphon.

Small Shays have a pair of four-wheel trucks, one at the front, one at the rear. Bigger Shays have a third truck under the cab. The heaviest Shays have an elongated tender with two power trucks underneath. In all cases the outside of each right hand wheel is geared to the shaft, giving a positive drive to all 8, 12 or 16 wheels through the solid axles. Sleeve couplings and universals divide the shaft between the cylinders and the individual trucks, letting the engine bend literally in the middle and thus adapt itself to uneven going, much like a thousand-legged worm. To counterbalance the weight of the right hand side, the boiler is set 'way off to the left of the frame, giving the engine from the front a curious lopsided appearance.

To top off the Shay's odd looks there is likely to be a massive stack. In many photographs the original

D. W. Thickens

Climaxes resemble rod locomotives. Cylinders mounted at either side of boiler parallel to track but inclined at a 40-degree angle drive crankshaft geared to axles. Above, San Joaquin & Eastern No. 105 at Auberry, Calif., around 1930.



Typical road through the towering redwoods of California's lumber industry.

stacks appear to have rusted or burned off and to have been replaced by homemade funnels of whatever design the camp boilermakers felt would serve as spark arresters. Old Number 1 of the Boise-Payette Lumber Company in Idaho wore what looks like a piece of hot water boiler for a stack. Others were diamond-shaped, some were balloons, some were sunflowers, some were beyond description.

Possibly the vast noise of the Shays helped win for them the admiration of loggers who affectionately called them side-winders, and liked to brag of their pulling powers. The Shays and the loggers had things in common; they weren't much to look at but they were hard of muscle and capable of heroic labors.

Invariably engineers on the logging roads had their own regularly assigned engines which they had to keep in repair as well as run. The whistle was usually the hogger's, and he had his own style in blowing it. Engine crew usually consisted of three men—engineer (who doubled as conductor), fireman, and switchman—but often the switchman was dispensed with and the fireman handled the switching and coupled cars as well. It was a man-killing job.

In logging railroad days there was no nonsense about cuts and fills. The tracks pretty well followed the lay of the land. Tracklayers often left behind them grades up to 10 per cent and 30 per cent curves. A Shay could take them both in stride, hauling its string of loaded skeleton-type Russell log cars over roller coaster tracks that would have made the engineer of a rod engine turn pale.

In the mountains, when bridges were the only answer to a canyon, they were built of logs and rough timbers. Some of these trestles attained fantastic proportions. One on the Longview line of the Weyerhaeuser Timber Company in Washington was 1130 feet long. In its maze of supports and braces were nearly half a million feet of timber. Traincrews rattling across this monster looked down 235 feet to the creek below.

Loggers liked to think they could take a geared locomotive anywhere.

Lynn D. Hoff

In 1885 this Lima-built, narrow-gage 4-4-0, decorated with Christmas tree on pilot and antlers on headlight, hauled a load of pine across a frozen pond near Lake City, Mich., on the 7-mile Cody & Moore between Clam River and Muskrat Lake.

Back in 1918, so old photographs show, they made a somewhat incredible portage of a 42-ton Heisler over a 1500-foot range of mountains on the Pacific coast. The logging crew hewed timbers and built a whacking big sled. On this they mounted the Heisler, then hitched the sled with chains behind another sled on which was a donkey engine. The cable was let out several hundred feet ahead of the donkey and made fast around the base of a sturdy fir. The donkey puncher then opened her up, and both sleds, together with donkey engine and locomotive, started up the mountain. In this fashion, with stops for water and fuel, the Heisler was portaged up and over the top, then down to the new logging site, a good ten miles. Hannibal and his elephants could have done no better.

WHEN the Shays had proved their worth, in their wake came many Heisler and Climax locomotives. The Heisler people had a couple of good selling points. They argued that since the gears of a locomotive were most vulnerable to wear and breakage, it was smart to have as few of them as possible. So only one axle in each truck was geared to the main driveshaft, and power was transmitted to the other axle through siderods connecting the two pairs of wheels. Thus the Heisler could power 12 drivers with only four pairs of gears. Heisler gears also ran in oil inside sealed housings, protected from mud, water, and flying ballast.

The engines made at the Erie, Pa., factory of the Heisler Locomotive Works had only two cylinders, but they could take a big gulp of steam and haul monstrous loads. On level track the biggest Heisler was rated to pull 5,351 tons without spinning her drivers. Even on a 10 per cent grade, after a shot of sand under the drivers, she would start off with 111 tons. The Heisler cylinders, of 18½-inch bore and 16-inch stroke, were mounted at right angles to the boiler, inclined downward toward the shaft, which was located under the boiler, parallel to the centerline of the track. The result was a semi-concealed shaft which, with the enclosed gearing, gave the locomotive a clean design.

The Climax also was a Pennsylvania product, coming from Corry. Of the three geared engines, it had the greatest resemblance to the conventional rod locomotive. On either side of the forward part of its frame a cylinder was mounted parallel to the track but inclined at about a 40-degree angle toward the ground. These drove a crankshaft running crosswise under the boiler. The shaft had a master gear to transmit power to a longitudinal center shaft connected in turn by bevel gearing to each of the four or six axles, depending on the number of trucks the locomotive had.

The Shay had several advantages over the other two designs. For one thing, all its bigger models had three cylinders, leaving two always "in power" if the engine happened to stop on a hill with the third engine at "dead center." With its exposed shaft and gearing, too, the Shay was easier to repair. Logging camp mechanics could replace a broken coupling or stripped gear without having

W. C. Whittaker

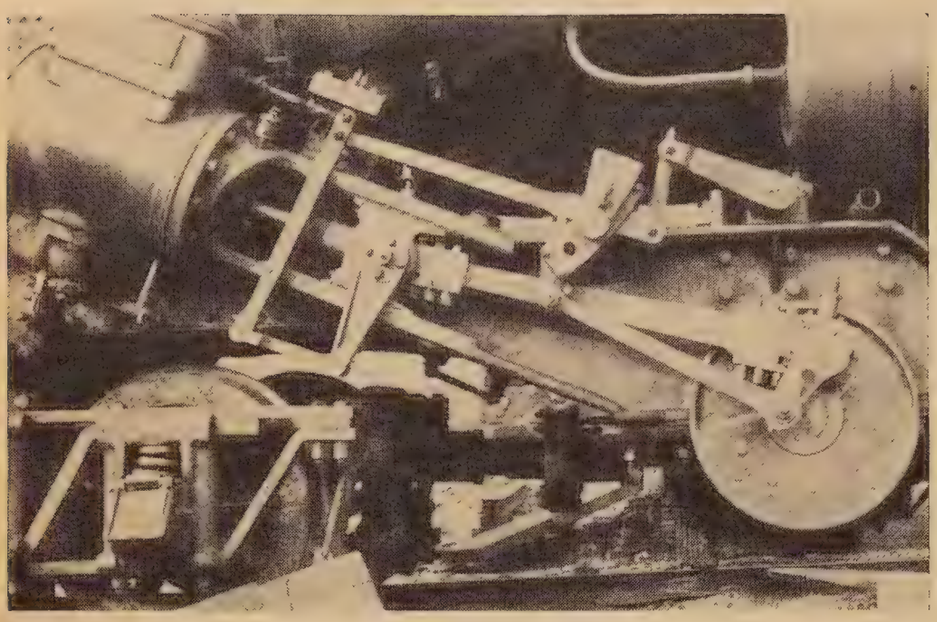
California's McCloud River Railroad once boasted a unique "cordwood special" pulled by this chunky 0-6-0, No. 6. The 64-mile short line runs between Hambone, Pondos, and Mt. Shasta, with connection to the Southern Pacific and the Great Northern.

Stewart Holbrook Collection

Around 1920 the Polson Logging Co. of Hoquiam, Wash., lined up its motive power for a family portrait. Our author, Stewart Holbrook, who says this is his favorite logging-photo, rode on or behind most of these 14 locomotives back in the days when he worked as a lumberjack.

Henry R. Griffiths, Jr.

With a string of logs in tow, an Edward Hines Lumber Co. Consolidation, No. 529 (formerly Union Pacific 529) backs west toward Seneca, Ore., where the Hines-owned common carrier, the Oregon & Northwestern, will shuttle them to Hines. For rosters of these two lines, see page 42.



Boyd J. McWhorten

Inclined cylinder of a Climax, No. 3, on Moore-Keppel Company's Middle Fork line, Ellamore, W. Va. Pistons drive crankshaft running crosswise under boiler.

to jack up the locomotive or run it over a repair pit.

When the original Shay patents had run their course, a locomotive of similar design was made for the logging trade by the Willamette Iron & Steel Works of Portland, Oregon. About thirty-five were built at an average price of $25,000. Being almost indistinguishable from Lima Shays, almost everybody, including Willamette salesmen, referred to them as Shays. Following the trend, most of these were oil burners. Oil's several advantages offset its higher cost. The engineer could operate the burner and the fireman was eliminated. Steaming capacity was increased. Oil fires gave off fewer sparks than wood, lessening hazard in the forest.

No matter that they were used in mining and other industrial operations, geared locomotives had their great heyday in the logging woods of the Pacific Northwest. From the Queen Charlotte Islands of northern British Columbia to Humboldt Bay in California, and from Hoquiam, Wash., to Libby, Mont., they clanked and snorted while hauling billions of feet of logs to the mills. One outfit alone, the Polson Logging Company of Hoquiam, used two rod engines, 12 geared locomotives, and 20-odd donkeys, all at one and the same time. Long-Bell, Weyerhaeuser, and Crown-Zellerbach had as many, perhaps a few more. In Washington alone 242 logging operations owned railroads with from 4 to 120 miles of mainline tracks over which rolled Shays, Climaxes, and Heislers. That was in 1922, almost but not quite at the apex of geared locomotive popularity.

George T. F. Rahilly

Probably the only diesel Shay in the world, this powerful Lee Tidewater Cypress Co. engine was built on a steam Shay chassis. A week's fuel costs $3.

THEY were never popular with major railroads. A few were purchased for switching services. The Santa Fe had some Heisler 4-4-4's that weighed 176,010 pounds and exerted 31,940 pounds of tractive force. Real oddities were the five Shays used by the New York Central on its 11th Avenue freight line in Manhattan. To civilize their appearance, the engines were chastely housed inside box-like sheet-metal bodies. Only the bottom portions of the drive wheels peeped from under their voluminous skirts. They had 12x12 cylinders geared to a pair of 36-inch driver trucks, and though they weighed only 70 tons, they had a respectable 27,400 pounds of drawbar pull.

Despite the carefree manner in which they were operated in the timber, there were surprisingly few accidents involving geared locomotives. Derailments were common enough—the hogger's shoes and overalls were generally caked with mud from working on his knees setting car replacers under derailed trucks—but because

(Continued on page 50)

Henry R. Griffiths, Jr.

A few miles up the big hill above Trout Creek, Oregon & Northwestern 1400 blasts through the woods at 10 miles an hour with 13 log-laden cars for its third and final trip of the day to the summit. The 51-mile short line, owned by the Hines Lumber Co., carries freight only between Seneca and Hines, Ore.

Amid derisive whistle hoots from delayed trains, they let themselves out on the main again.

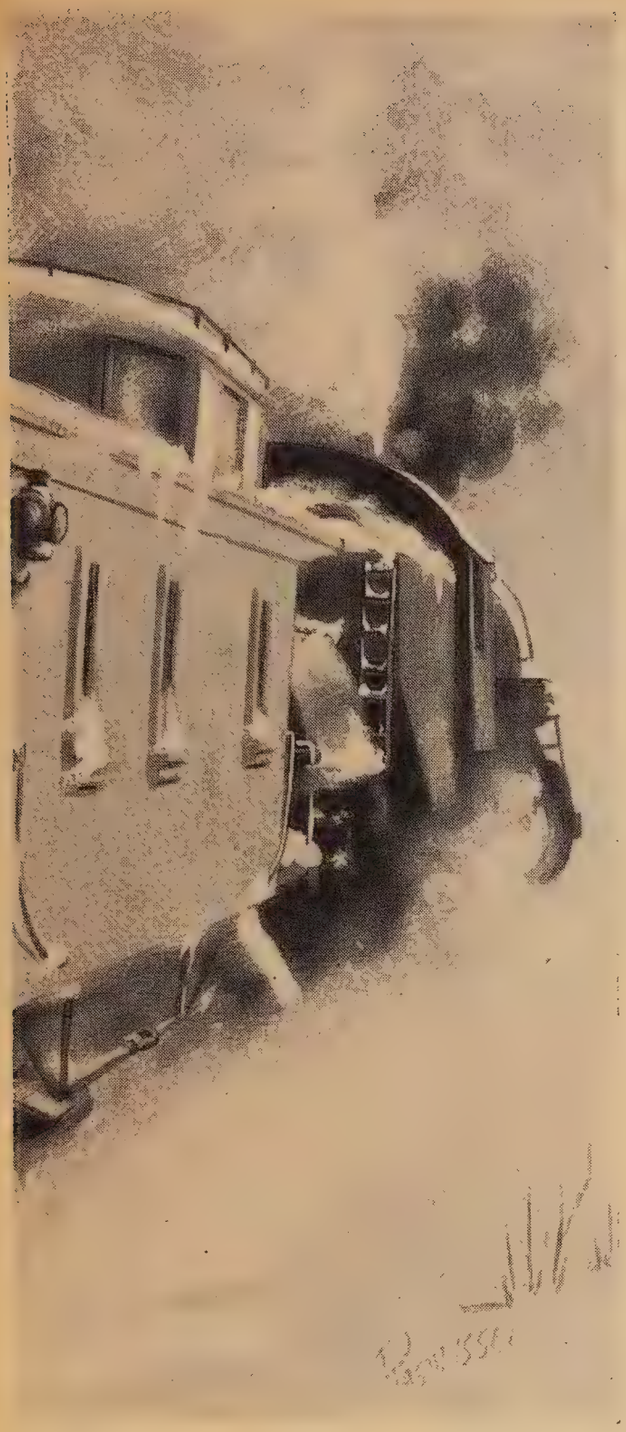
IT WAS MIDWINTER. A gale howling down from the Northwest had dropped the quicksilver in the tube outside the yard office to somewhere near zero. Falling snow stippled the landscape. The blizzard that gripped the Idaho Division of the Oregon Short Line swirled as far south as Brigham City on the Utah end. Also stormbound was the western stretch of the old San Pedro, Los Angeles & Salt Lake; but instead of bemoaning their plight, the train-yard crew at Salt Lake City rejoiced. Much snow meant less work—for them. Or so they thought.

You can file this yarn under fact or fiction. I got it straight from one of the characters involved. I refer to a young switchman we called "the Kid." His father was a professional strong man billed as Hercules, who toured the country with the Al G. Barnes Circus each summer and played the Keith vaudeville circuit in the winter. Hercules was hot-tempered. At least twice that I know of he'd been sent to jail for beating up guys he didn't like.

But the Kid was easy-going. I remember him as a husky fellow with shoulders like watermelons, a mop of straw-colored hair, and the whitest teeth I've ever seen. Those ivories would flash in a slow friendly smile while he was talking.

The Kid and I herded cars for the Short Line. It was a warm spring evening in 1917. Nothing stirred. For a while the only sound you could hear was the chorus of baby frogs somewhere out in the darkness. We sat in the switch shanty, the two of us, munching Swiss on rye and washing it down with ale. In between bites the Kid told me his story.

The details of that story are still fresh in my mind. It's a funny thing.



A SWITCH-SHANTY YARN

It's No Fun Herding Cars in a Blizzard, So You Naturally Need a Bit of Recreation

by HAYWIRE MAC

ILLUSTRATED BY DANA B. RASMUSSEN

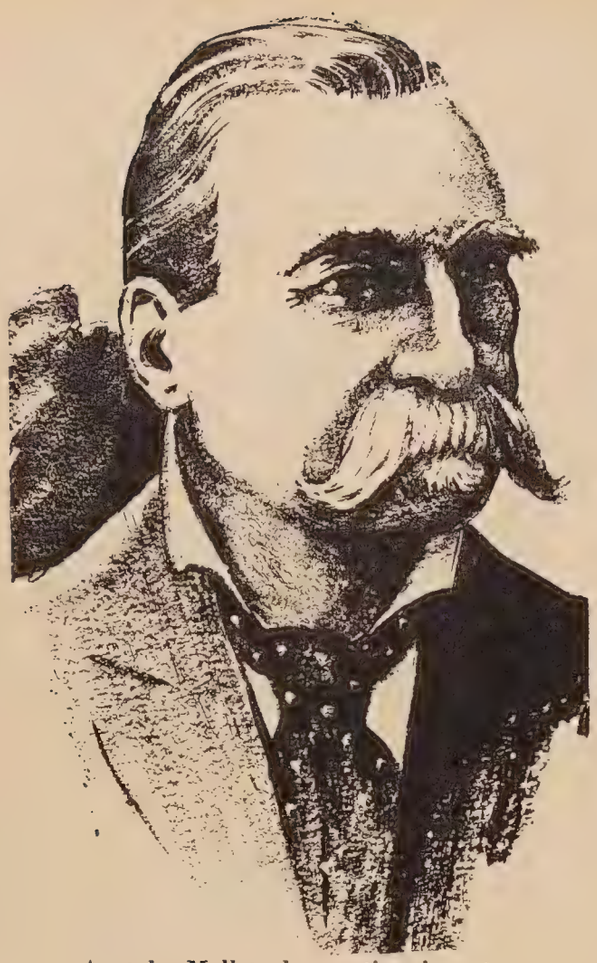
When you're wrinkled and gray you can't always recall what your wife served you for breakfast yesterday morning, but you have a vivid recollection of listening to a casual acquaintance chew the fat thirty or forty years ago. Why is that? I don't know. Maybe it's because you like to remember what happened in your wild, free youth, when you held the world by the tail, while your brain pulls down the shade over the stodgy routine of later years.

Getting back to the story: Picture a night yard crew, mostly boomers, battling the cars from six P.M. till a bleary-eyed six A.M., minus an hour for lunch. Sometimes the yard goat would bark continuously, and if you were a pin-puller you just about kept one foot in the air all night long and you really earned your fabulous thirty-nine cents an hour. But on rare nights you'd get your chores done early, say before two o'clock, and catch a bit of sleep.

The engine foreman was a chunky bozo who answered to the name of "Six-Shooter Bill." That wintry night the last of a cut of cars had been kicked into clear and the boys watched 'em roll to a smooth coupling. Six-Shooter Bill held his smoky lantern high—the good old spot signal that is widely understood but not embalmed in any book of rules. (*Spot*, by the way, means "A pause in the day's occupation," to quote the poet Longfellow.)

Well, when Six-Shooter gave the lunch highball, the hogger tooted his whistle twice to say, "I get you," and slammed his cab window shut against the icy wind and snow. At the same time the tallowpot began banking his fire, and then he made snug the flapping old storm curtains that shielded

(Continued on page 67)



Anatole Mallet, locomotive inventor.

THE MIGHTY MALLET

by H. L. KELSO

The Immortal Frenchman's Locomotive Grew up to Be the Champion Mountain-Climber of the Appalachians, the Rockies, and the High Sierras

DIESELS!" snorted the Norfolk & Western fireman when they asked him when the growlers were coming to his road. "Why, we tried 'em in 1952, and our boys'll stack a 2100 Class Mallet ag'in 'em any day."

The mighty Mallets are that good. Once these giant compounds were the monarchs of American rails, but today they have become a vanishing race. Of all the Class I roads in the United States, only the Norfolk & Western and the Chesapeake & Ohio still have them in operation.

The Norfolk & Western, whose stubborn refusal to relinquish steam power has alternately appalled and fascinated the rest of the locomotive world, remains their last stronghold. N&W's big Y6b Class 2-8-8-2's still ply the big hills out of Roanoke, Va., and in 1950, when the Elkhorn tunnel on the electrified Pocahontas Division was double-tracked with reduced gradients and curves, the Mallets moved in to replace the electrics that had hauled the long coal drags on the line for thirty-five years. What happened exactly during that test back in 1952, the same year incidentally in which the last Y6b was built, has never been made entirely clear, but the N&W never bought any diesels, and even diesel promoters have been remarkably close-mouthed about the results.

The Age of the Mallet (rhymes with *galley)* began in 1867 when Anatole Mallet (rhymes with *allay),* a brilliant French civil engineer, turned his talents to the design of railroad locomotives. What the railroads needed, Mallet decided, was an engine of unprecedented power, which would be capable nonetheless of negotiating sharp curves and of operating on already existent trackage without pounding it to pieces. Rigid-coupled, single-expansion engines — engines whose cylinders receive steam direct from the boiler and exhaust it out of the stack—had just about reached the limit of the development, or so Mallet decided.

If you wanted more power, the thing to do was to use a compound engine, one which uses the exhaust steam from a set of high-pressure cylinders to operate another set of low-pressure cylinders, the same steam being used twice before finally being exhausted from the stack. Such engines were coming into increasing use at the time. The trouble was that if you built a compound as powerful as Mallet had in mind, the rails wouldn't stand up under the weight, and if you distributed it over a greater area, you

Articulation permitted Mallets to operate even on twisting, curving narrow-gage pikes. No. 51 of now-abandoned Uintah Railway, above at Atchee, Col., in 1938, was built by Baldwin in 1928, weighed 244,400 pounds, had a tractive force of 42,100.

Union Pacific

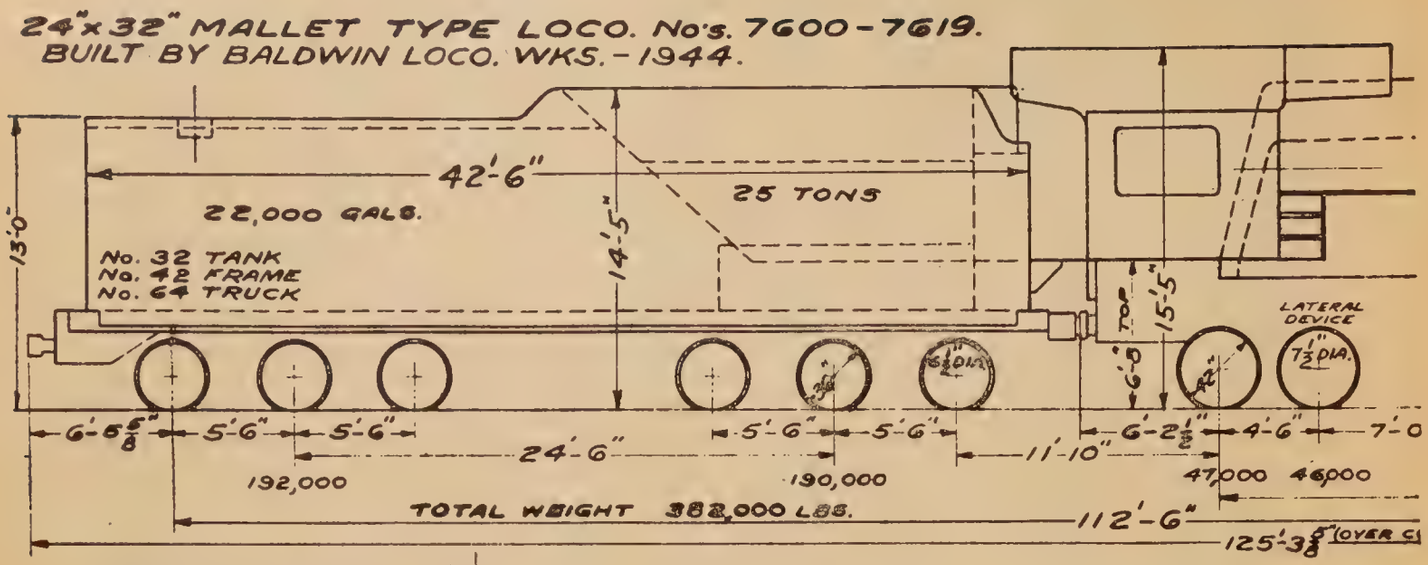
Union Pacific's history-making 4-8-8-4's, the Big Boys, were simple articulateds, dispensing with compounding principle. But by this time, most roads had already converted their compounds to simple. Alco built the 4019 in 1941.

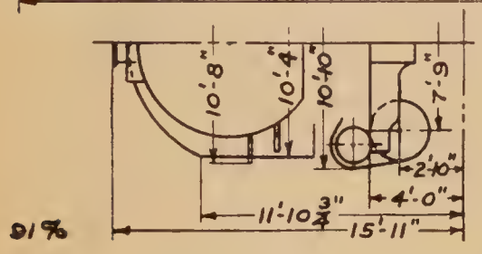
H. L. Kelso

Mighty Mallet and midget Mikado give a Union Pacific extra a boost over Cajon Pass. Built by Alco as a compound, No. 3556 was later converted to simple. Like all UP compounds, she was a 2-8-8-0 with a tractive effort of 99,840 and weighed over 500,000 pounds.

Norfolk & Western

Norfolk & Western built 43 of these high-speed, dual-purpose Class A's between 1936 and 1950. With a tractive effort of 114,000 pounds, they're the most powerful 12-drivered simple articulateds in the United States. Here, No. 1203 relaxes on N&W's table at Roanoke, Va.





91%

Heating Surface Sq. Ft.:	
Fire box:	
Sheets & comb. chamber	545
Syphons	211
Total fire box	756
2¼" tubes	757
4" tubes	3785
Grand total	5298
Superheating	2118

couldn't get your machine around curves.

Mallet turned his attention to the articulated locomotives which were being used in Austria and in Ireland. An articulated locomotive is one which is jointed, hinged. When it goes around a curve, it bends. The articulation principle occurs in the tricycle or bobsled. A bobsled's rear runners are attached rigidly to the body of the sled, so that the two operate as a unit, but its front runners are joined to the sled body by a king pin, so that they can turn and swivel independently of the rest of the sled. With articulation, Mallet's problem was solved.

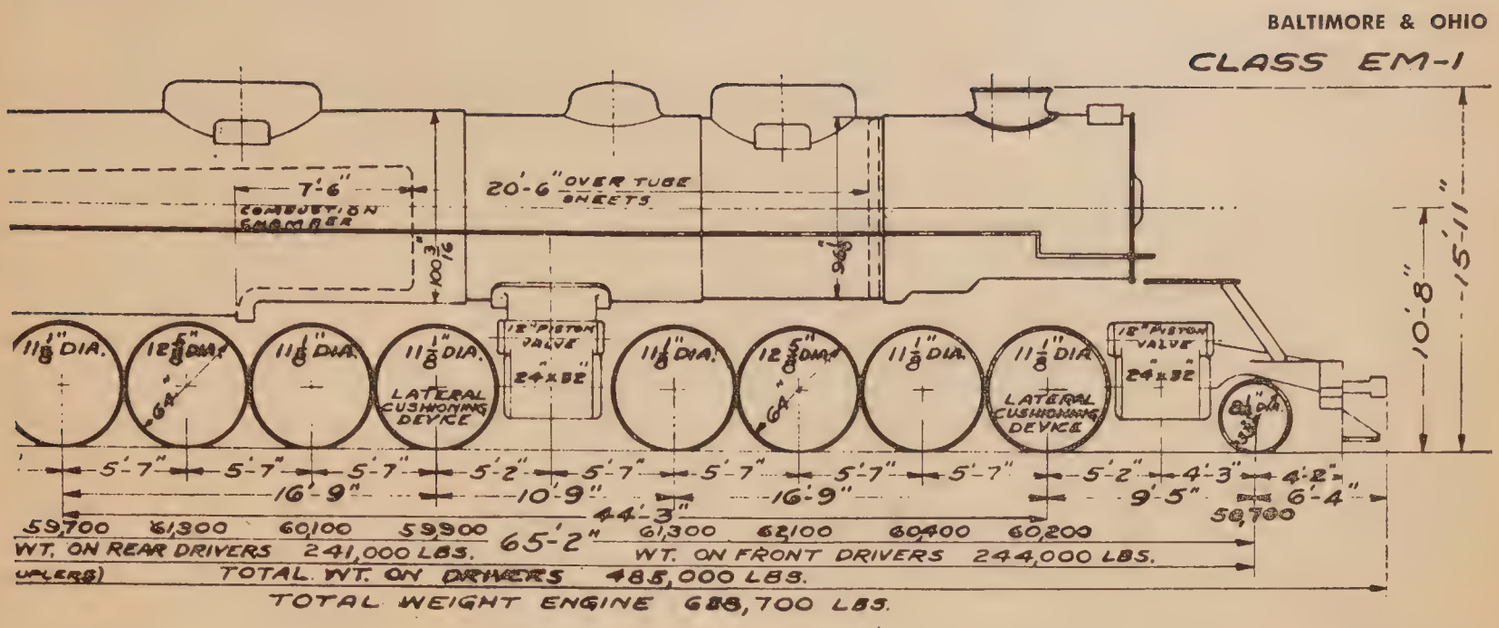
By combining compounding with articulation, he evolved the locomotive that was to make his name a byword in the field of railroad motive power. His machine was powerful, it was flexible, and its weight per axle was light enough for existing rail.

Mallet's first compound articulated 0-6-6-0 went into service in 1885 on the Bayonne & Biarritz Railway, and in the next decade Mallets were put into service in many countries throughout Europe. M. Mallet's Mallets were a success, particularly in rough, mountainous country. The moment one engine lost its feet, the unbalanced power was automatically equalized and the slipping drivers compelled to get a fresh grip on the rails without loss of energy to the whole locomotive. It was this capacity to keep moving that was one day to make the Mallet the champion mountain climber of the Appalachians, the Rockies, and the High Sierras.

THE AGE OF THE MALLET in America began in 1901 when Leonor F. Loree, like Mallet a former civil engineer, became president of the Baltimore & Ohio. Loree realized Anatole Mallet had conjured up quite a power plant, and as soon as he came into office he lost no time in contacting Mallet about the compound articulateds with an eye to having one designed for the Royal Blue Line.

In 1904, Alco completed Loree's locomotive, America's first compound articulated, and shipped it to St. Louis for exhibition at the World's Fair. The new giant, an 0-6-6-0 weighing 334,500 pounds without tender, became the sensation of the Fair. A titan of almost unbelievable proportions, she combined two power units in tandem beneath a single mighty boiler. Only the forward unit was flexible, being coupled to the front end of the rear engine, which was rigidly attached to the boiler. Whenever the locomotive left a straightaway, the smokebox of the long barrel would be thrown far to the left or right of track center.

Visitors swarmed in to look and gape and marvel, but skeptical railroad men picked the design to pieces. She had been shipped without trials, and nobody knew, for sure, whether she would work. When the engine, numbered 2400 and nicknamed "Old Maud," probably in honor of a hard-pulling comic strip mule, later promenaded her power and flexibility on the B&O's Sand Patch grade, motive power men conceded that a tremendous forward step had been made in the evolution of the steam locomotive. Here was an engine far more powerful than Mallet had ever dreamed, which not only did the work of two single-expansion mills but cut labor


BALTIMORE & OHIO
CLASS EM-1
20'-6" OVER TUBE SHEETS
LATERAL CUSHIONING DEVICE
LATERAL CUSHIONING DEVICE
59,700 61,300 60,100 59,900 61,300 62,100 60,400 60,200 59,700
WT. ON REAR DRIVERS 241,000 LBS.
WT. ON FRONT DRIVERS 244,000 LBS.
TOTAL WT. ON DRIVERS 485,000 LBS.
TOTAL WEIGHT ENGINE 688,700 LBS.

Valve gear	Walschaert
Driver brake	American
Superheater	Type E
Reverse gear	Alco type H
Feedwater heater	Worthington
Stoker	HT-M
Curvature—normal	12°
Curvature—slow	18°
Turntable	115 ft.
Cylinder horsepower	4870
Total weight, engine & tender	1,010,700 lbs.
Tractive power	115,000 lbs.
Factor of adhesion	4.22
Steam pressure	235 lbs.
Fire box, size inside	228"x96"
Grate area, 177"x96"	117.5 sq. ft.
Tubes, number	177....63
Tubes, outside dia.	4"....2¼"

costs in half. It seemed incredible.

The Great Northern was first on the bandwagon in 1906 with an order for five Baldwin 2-6-6-2's, the first Mallets of this wheel arrangement. The Big G was so pleased with their performance that soon another twenty-five were in service in the mountains between Leavenworth and Spokane, Wash.

A year later the Erie plunged into Mallet history with the most unusual Mallets ever built—the first 0-8-8-0's. At the time the largest engines in the world, these were the first and only hand-fired Mallets and the only Mother Hubbard Mallets ever used in America. Needless to say, when these man killers rolled into Susquehanna, Pa., without stokers, for pusher service up to Carbondale, Erie got itself a mess of labor trouble. One Erie bakehead, after his first trip on one of these monstrous hand-fired 0-8-8-0's, threw his over-sized scoop shovel into the firebox, fled from company property, and was never seen again.

Erie's most famous Mallets were three gigantic 2-8-8-8-2 *triplex* engines named *Matt Shays* in honor of Erie's gospel-preaching hogger. These big babies had six 36-inch cylinders so designed that the center set, which received steam direct from the boiler, would exhaust it to the front and rear sets of cylinders, an arrangement which made for tremendous power. Unfortunately Baldwin's George R. Henderson, who designed them, miscalculated the grate area needed for generating steam in so large a boiler, and the big mills went down in history as colossal failures.

That same year, 1907, Alco built the first 2-6-6-0's for the Virginian, the beginning of what was to be a fabulous roster of compounds. With its heavy rail, strong bridges, and ample clearances, the Virginian main line could accommodate engines weighing up to one and a half million pounds. Under such conditions, the 2-6-6-0's proved to be much too small, and the Virginian's mighty 2-8-8-2's came into being, to be followed by the most successful of all super-compound Mallets, the 2-10-10-2's. These giants had a tractive effort of 147,200 pounds compound and a never-equaled 176,000 pounds simple. Their low-pressure cylinders, 48 inches in diameter, were the largest ever bored for a railroad locomotive. One of them once handled a 17,600-ton coal drag from Victoria to Sewell's Point, Va., over a two percent ruling grade.

Another famous Virginian Mallet was the 700, a 2-8-8-8-4 *triplex,* patterned to some extent after the Erie's *Matt Shays.* Once again George Henderson miscalculated the grate area, and a second colossal failure resulted. Rebuilt as two engines, the 700 operated with equal success as a Mikado and as a 2-8-8-0 Mallet.

After 1907, the rise in popularity of the Mallet was rapid, and well-nigh universal. By 1908 Alco was building two Mallets for export—to France, and by the time Mallet died in 1919 at the age of eighty-two, the rails of the American continent thundered with the massive machines which bore his name.

IN SUCCEEDING YEARS, many strange Mallet types were built for experimental purposes, the Santa Fe being the leader with such oddities as a 4-4-6-2 passenger Mallet and a

hinged boiler 2-6-6-2, conceived in the road's engineering department and hatched in their Topeka shops. Generally these homespun products had a fairly unsatisfactory performance record. Undeterred, the Santa Fe got together with Baldwin over a monstrous 2-8-8-8-8-2 *quadruplex* type compound. Again George Henderson was the presiding genius. Before the *quadruplex* was even out of the planning stage, Henderson, obsessed apparently by super compounds, drew up plans for an even larger engine known as a *quintuplex,* which was to be his next offering to any railroad in the market for super-power. But when the Santa Fe decided against building the *quadruplex,* his vain dream of the unparalleled quintuplex crumbled into ashes as well.

The performance records of the early Mallets were uneven. Part of the trouble lay with the early mechanical stokers which were as new as the Mallet itself. One type, known as the Street Overhead, lifted coal by elevators through tubes on either side of the firebox. In operation, the noise of the stoker engine, mounted on the boiler head just ahead of the fireman, was little short of deafening. One day a Frisco fireman and his engineer nearly came to blows when the bakehead accused the throttle-jerker of pulling out without warning him to get his fire in shape. The engineer had whistled in a flag and a highball, but the racket from the stoker was so overpowering that the fireman hadn't heard the whistle.

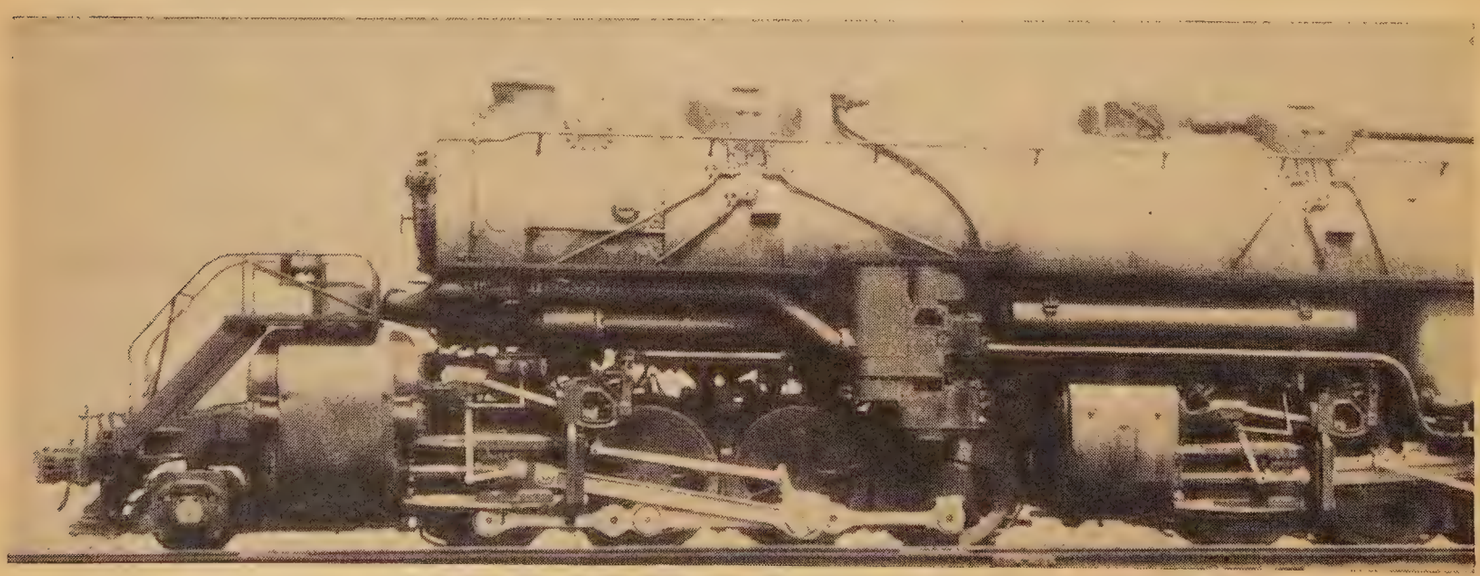
Powerful though slow, the Mallets were ideal for pusher and hump yard service. But, in the early days in particular, they were costly to maintain. Until the superheater—a series of tubes running through the flues which preheats and "dries" the steam on its way from dome to cylinders—came into use, they were death on fuel and water. Later the addition of feedwater heaters, units which raise the temperature and speed the rate of evaporation of cold water from the tender before it passes into the boiler proper, lowered costs even more.

But some roads never developed much enthusiasm for them—the Milwaukee, for instance. "By and large our original Mallets were never very successful," says the Milwaukee's Chief Mechanical Engineer, A. G. Hoppe. "In fact, the locomotive department had trouble keeping our first Mallet free enough of steam leaks to show it to the management. Tests made in

THUNDERING across trestles, wheels clicking
In time to drivers ahead,
Breasting the curve, taut couplers jar—
The semaphore's gleaming red—
Grinding to halt, the Mallet stands
Like a Belgian gelding, fine,
Sturdy in build, awesomely big,
With power in every line.

Highball! Snorting, she pounds the steel;
Heavy drivers slip and spin.
A string of cars is moving like one
When the slack is taken in.
Then up the grade, every inch a fight,
Slow winds the redball train,
The mighty Mallet heading for town
With a load of Western grain.

—M. Jose Ramos



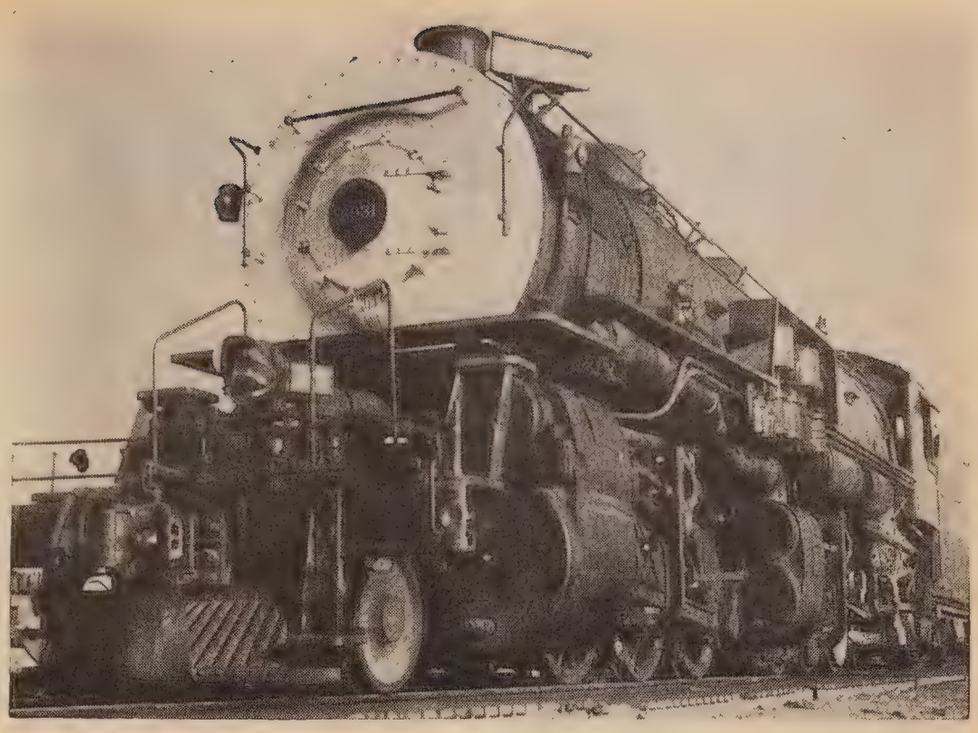
This sleek, slim-looking Y6a class compound, No. 2156, was turned out in Norfolk & Western's shops

1915 on our electrified trackage at Butte, Mont., proved electric engines far superior. As time went on we installed superheaters and converted the engines to simple operation and our results were much better."

Fundamental objections to the compound articulateds remained nonetheless. The larger they became, the greater grew the already enormous back pressure from the forward cylinders. At any but the lowest speeds, power output was unbalanced, resulting in loss of horsepower and in heavy pounding when the locomotives drifted. The advantage of distributing weight of the reciprocating and rotating parts over two sets of cylinders was now gone as far as the low-pressure engine was concerned, and road clearances precluded larger bores.

In starting on heavy grades, engines were switched over to simple operation to eliminate the high back pressure against the rear cylinders. By eliminating these through simple running and increasing the power of the forward engine proportionately, tractive effort could be boosted twenty percent.

The difficulties seemed unsurmountable, and gradually road after road converted to simple operation. It became a moot point whether a converted Mallet was any longer a Mallet. The question still hasn't been settled. Many writers use the term "true Mallet" to distinguish the compounds from the simple articulateds, while others apply the term "Mallet" to compound articulateds, designating the simple engines as simple articulateds.

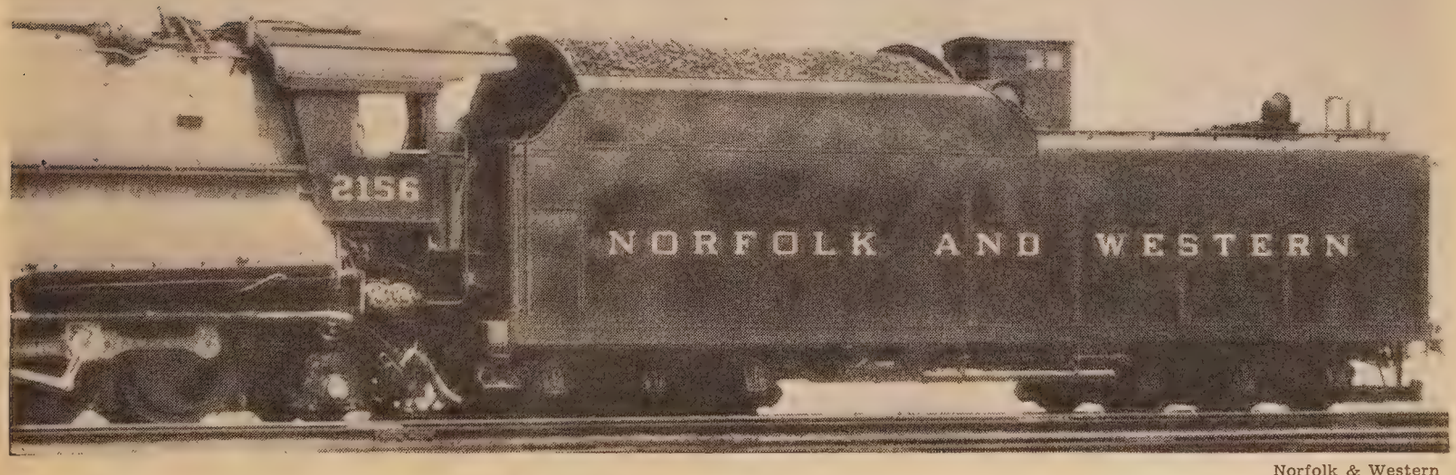


H. L. Kelso

Southern Pacific's last compound, No. 3931, a 2-6-6-2, was scrapped in 1954. Built by Alco in 1921 for Verde Tunnel & Smelting Co., she was sold to SP around 1940.

Today the Chesapeake & Ohio and the Norfolk & Western are the only Class I roads still using the big compounds. In 1948 the C&O startled the railroad world by ordering twenty-five 2-6-6-2's, subsequently reduced to 10, from Baldwin—the first the builder had made since the twenties. Last of the ten 2-6-6-2's to be outshopped was No. 1309, which had the additional distinction of being the last steam locomotive Baldwin ever built.

The Mallet of today, the "true Mallet," that is, is a far cry from the early engines. The Norfolk & Western's modern and efficient Y6b compounds, equipped with everything from roller bearings to mechanical lubricators, are the last word in motive power. N&W's last Y6b, No. 2200, was outshopped only three years ago, in 1952, but if you're a betting man, you'd better wager she'll be the last to be built in America. ●



Norfolk & Western

in 1942. Sister Y6b's, built between 1948 and 1952, were last compounds to be outshopped in America.

Key to the Bay

Across the Six-Mile Route of the San Francisco-Oakland Bay Bridge Runs the Key System, One of the Most Modern Interurbans Anywhere—and One of the Last

by DONALD SIMS

BY LATE 1939, the first trial run of an electric interurban over the twin-track deck of the new San Francisco-Oakland Bay Bridge was history. Using fifty-six multiple-unit trains, three interurban companies —the Sacramento Northern, the Interurban Electric, and the Key System —were capable of transporting 90,000 people across the bay in a single hour. At last commuters from the east side of San Francisco's harbor had what they'd wanted for years—a direct route to the job. The future of trans-bay interurbans looked bright.

But both the Sacramento Northern and the Interurban Electric, a Southern Pacific subsidiary, are gone now, and today, on the average, only 25,000 passengers, most of them commuters, daily ride the Key System—the only remaining rail route across the Bay—whose five lines spread fanwise from the east end of the bridge across the heavily populated industrial areas of Oakland, Piedmont, and Berkeley.

From the beginning, the Key System has been tied to the commuters' coattails. When in 1902 a group of influential East Bay businessmen decided a convenient transportation link with San Francisco would further the growth of their communities and formed the San Francisco, Oakland & San Jose Railway Company, the Key System's earliest predecessor, a commuter service of sorts already existed —the Espee's combination train and ferry service—but the smoky, soot-stained trains left much to be desired. It was a gamble, perhaps, but they considered it worth the risk.

Track was laid, wire strung, and a long wooden trestle built out into the waters of the bay, and in October, 1903, the first line from Berkeley was opened, which connected with a spanking new ferry service into San Francisco. The new line proved a great success, and in the years that followed additional routes, as well as local streetcar lines, were constructed to Piedmont and Oakland.

From the first the SFO&SJ kept up to and, in some respects, even surpassed steam line standards. Many a good steam man was lured away from the Espee and other steam roads because he knew that a square deal was waiting for him on the new line, and more than one Espee man worked two shifts a day, secretly doffing overalls for the starched uniform of the Key motorman when his day's work was done.

When it later became clear that the SFO&SJ would never get to San Jose, the company became the San Francisco-Oakland Terminal Railways, and remained so until 1923, when the Key System Transit Company, probably so named because of the role the company played in the growth of the East Bay region, came into existence.

By this time the Espee's Interurban Electric was in operation, and each line strove to outdo the other for the rider's dollar. Though the IE's red cars were the equal of the Key's orange ones, Key had one distinct advantage over its rival—Key's trestle was nearer to San Francisco and its ferries were faster. Thus the Key Route always made the best time into the city and got the commuter home first.

The Key ferries, painted orange like the Key cars, became famous locally for their corned beef hash, apple pie, and coffee, and for the stringed orchestra which on Sundays was added to the crew.

Key's most famous ferry was the *Peralta,* which figured in two of Key's most shocking accidents. While rounding Yerba Buena Island with a load of homeward-bound commuters late one afternoon in February, 1928, the *Peralta's* ballast apparently shifted suddenly, for her bow dipped under the gray-green water. When the deck

Donald Sims

A modern open-air brick station in Berkeley marks the end of the 12-mile F-line, longest of Key System's five routes.

rose again an instant later, thirty commuters had been dashed into the icy waters of the Bay. Naval craft racing through the fading light managed to save most of them, but five were drowned.

This wasn't the Key's first taste of disaster. During an early morning rain four years earlier, a westbound Sacramento Short Line train had collided with a four-car Key train, No. 729, which had stopped for a red block on the fill leading to the pier terminal. The brakes went on in time, but on the wet rails the Short Line motor failed to stop, sliding with a sickening crash into the rear end of the Key car. When the last body was pulled from the wreckage, ten people had been killed and thirty injured.

But even more trouble lay ahead. This time it was a $3 million fire which broke out late one evening in May, 1933, and spread across the entire width of the pier terminal. Fire boats approached by water, but fire engines couldn't get near, except by flatcar, and the power failed before they reached the blaze, leaving them stranded part way out on the fill. When the sun rose the next morning, the *Peralta* lay gutted at her mooring, and the fire-twisted frames of fourteen interurbans rested in the shallow waters where once the terminal stood.

Trans-Bay service on the Key was cut off for three days until emergency facilities could be established. Fortunately one ferry slip escaped the flames, and the company was able to carry on temporary service until a new pier terminal could be built to replace the old.

But the destruction of the old terminal was not without its blessings. Built on pilings, the building rocked violently and catapulted passengers in the waiting room out of their seats whenever some Short Line motorman, anxious to make ferry connections, slammed to an emergency stop within the terminal limits. The company had forbidden the practice, of course, but that wasn't always enough to stop it.

THE CONSTRUCTION of the bridge ushered in a new era on the Key System. Beginning with experimental unit No. 165 in 1936, the company set about systematically to modernize its equipment. By the time the bridge opened, the old wooden cars were gone, and 88 two-car articulated units numbered 100-187 ran in their stead. The California Toll Bridge Authority owned Nos. 151-187. Only 165-187 were completely new. Ninety percent new, each of the others incorporated some spare parts from older cars. Except for Nos. 100-104 built in Key's Emeryville shops, most of the interurbans came from Bethlehem Steel. Units 100-124 have narrow windows with straight sides, while the rest have curved sides with large windows, among the largest ever used on electric cars in the United States.

Traces of other and earlier companies still cling to various parts of the Key System. Trolley wires which once served the red cars of the Interurban Electric still hang in the San Francisco Terminal and the F route uses part of the old IE right-of-way. At the Emeryville shops you're likely to see a few old New York IRT elevated cars, once operated by Key on the United States Maritime Commission's line to the Richmond shipyards. Decorated with pantographs and a few additional frills, they're now used only on work trains. Beyond Tower 2 on the A route you may see a coal-black electric freight engine labeled *Sacramento Northern* used by the Oakland Terminal Railway, a company which operates Key's one-time freight service and which still uses some of Key's main line. And the Sacramento Northern still runs one electrified freight a day to Port Chicago over a line so steep that it takes two freight motors to handle seven cars.

The best time to ride the Key is at night when San Francisco and the East Bay cities are reflected in the dark mirror of the bay. Peak traffic occurs in the early evening when up to fifty trains, some of them three units (6 cars) long, are on the line. In the terminal astride the bridge, the towerman's board glows with lights lettered for the five Key routes —A, B, C, E, F. Each line has its own color, and an identification marker called a class light sits high on the end of each car—gold and blue

Donald Sims

Its pantograph reaching invisibly for the catenary in the darkness overhead, this smart two-car articulated unit waits between runs on the F line. One of 37 cars owned by the Bridge Authority, 159 came to the Key with the opening of the span.

glistening in the darkness, for instance, identify a B train. And on the bridge, green, yellow, and occasional red signals control traffic with automatic precision.

The Key has never had an accident on the bridge, and with automatic train control, it isn't likely that it ever will. A 30 mile-an-hour speed limit governs the over-water journey, but it would be impossible for two trains to collide at more than 11 miles an hour. Muted ATC signals in the motorman's cab go off constantly and these must be acknowledged quickly or brakes automatically slow the cars first to 25, then to 17 miles an hour. If the signal is still ignored, the car drops to 11 miles an hour. With such a set-up, even the familiar fog doesn't slow up rail traffic.

The Key System begins with a big loop of trackage at the terminal in San Francisco, climbs a maximum grade of 3.5 percent several hundred feet onto the lower deck of the 6-mile bridge, which it shares with trucks and buses. Part way across the bay, the cars descend onto Yerba Buena Island, adjoining the naval base at Treasure Island, before moving on to Oakland.

During the war the Key offered the thousands of sailors stationed at Treasure Island about the only route to the mainland. Each Key unit holds 140 persons seated and 158 standing, but the way those Navy men packed themselves in the conductor sometimes couldn't even get the door closed and had to evict them forcibly before the train could start. Sometimes, too, playful gobs pulled the air valve, forcing the conductor to alight and reset it before the traction motors would respond, on one occasion tying up the whole bridge for as much as an hour.

Though 600-volt third rail is used on the bridge and approaches, most of the system is graced with catenary. And beyond Oakland Yard, where all regular equipment not in use is stored, the pantographs are raised with a sharp hiss of escaping steam to the overhead wire.

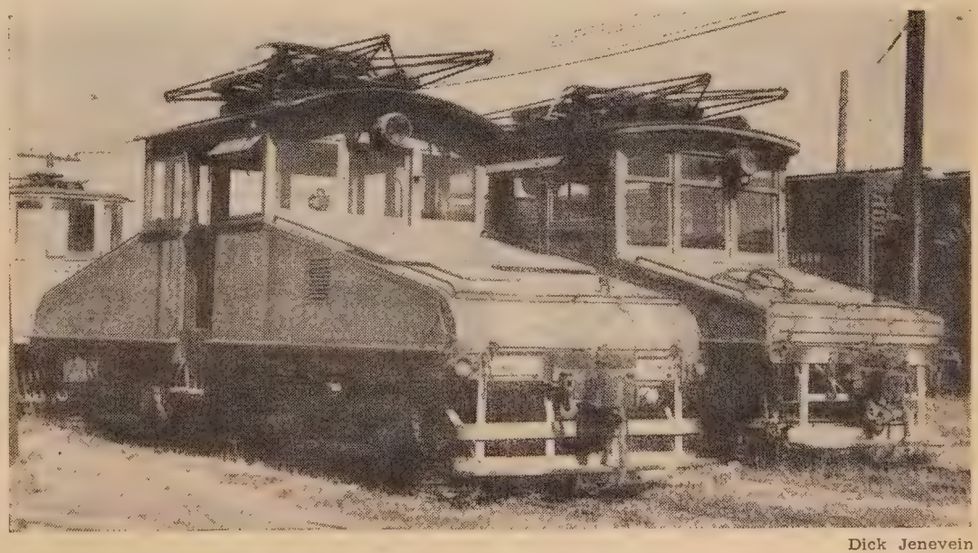
Beyond the bridge the five Key lines radiate across the East Bay communities like the fingers of one hand.

Donald Sims

The C line runs through the streets and back yards of the prosperous town of Piedmont. Here, unit 179 climbs a steep hill on a section of private right-of-way.

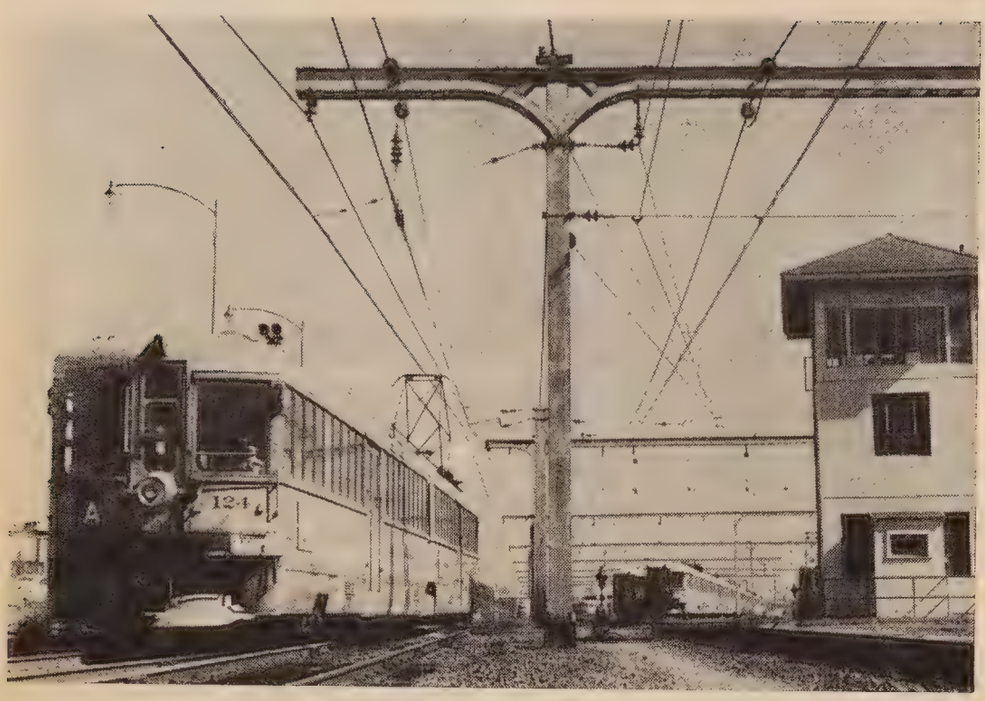
A runs to Oakland, B and C to Piedmont, E and F to Berkeley and the University of California. The twelve-mile F line is the longest, but the others have a respectable length, averaging ten miles each.

ON THE SURFACE, the Key System seems to have undergone little change since the bridge opened. When National City Lines took control in 1946, the traditional orange was replaced with the now-familiar yellow, green, and white color scheme; the name has been altered slightly to include "Transit Lines"; and the A line has been shortened a bit as a result of highway construction. Yet eventual abandonment of all rail lines is in the offing. Management wants



Dick Jenevein

Oakland Terminal 1001 and Key 1000 at Yerba Buena yards, Oakland, in 1942. OT, which operates Key's former freight service, runs over some of Key main line.



Donald Sims

No. 124 glides quietly past tower 2 just beyond the Oakland side of the Bay bridge. Beyond tower is multi-tracked Oakland yard where passenger cars are stored.

Steve Maguire

Interior of articulated Key car. Each unit seats 140 persons, stands 158.

it; a committee of the state legislature, which would like to see the bridge route paved over for commercial vehicles, has approved it; and some East Bay residents have even given it the nod. Enough of them didn't, however, early in 1953 when they blocked a move to abandon completely lines A and B.

But since then things have changed. A strike brought operations to a standstill last July 23, and for more than two months Key System rails sat rusting. By the time it was over, on October 9, a lot of patrons had found they could get across the bridge some other way and didn't come back. As a result, train service has been curtailed, and already buses are being substituted for night and Sunday service on lines C and E.

And so at the moment the future of the Key System looks black. The causes are familiar to anyone who's paid any attention to electric lines in the past few years—competition from gas-driven vehicles, rising costs, and public apathy.

Just recently the Key System petitioned California's Public Utilities commission for permission to replace all of its trans-bay lines with buses, providing the State would pave the present right-of-way. But the Bay Area Transit Commission, which has plans for an integrated nine-county rapid transit system in which Key's bridge trackage would be a vital link, wants to preserve the bridge line at all costs. Whether they will succeed is anybody's guess. But at the moment interurbans to San Francisco appear to be running on borrowed time. ●

THE OLD HASH HOUSE

TAKE me 'way back to Nevada, where beside the gleaming track,
Standing just next to the switch-head is the railroad eating shack.
Where the foothills cut the sky-line on the west and on the east,
Where the sunset's gorgeous rainbow gives the eyes an evening feast.
While trailing down the canyon comes a sneaking little breeze
That cools your heated blood and brains and makes your fingers freeze.

Take me back to where the porter, "Hashhouse Willie," beats the gong,
While the train stops and the tourists rush inside, a hungry throng—
I wouldn't mind the daily kicks 'bout the price of apple pie,
Or, "Beans fifteen cents and coffee ten! It's robbery!" they cry.
"What state is this Nevada in?" I can hear someone ask,
And, "When do you think you'll own this joint? How long will you last?"

—Bessie Bardsley

INFORMATION BOOTH

ASK BARBARA: Railroad questions are answered here every issue by our research expert—as many as space permits. Top priority is given to subjects that seem to be of wide general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York 17, N. Y. No replies will be sent by mail.

1

Question *Which is North America's longest regularly scheduled run with a single diesel locomotive?*

Answer The diesel hauling the Canadian National's new *Super-Continental*—which since April 24 has been slashing more than 14 hours from previous schedules—operates without change between Montreal, Que., and Vancouver, B. C., 2,930 miles. Engine crews, of course, change at regular division points en route.

2 *Are any steam locomotives being built for Class 1 railroads in North America?*

Not right now. Latest figures from the Association of American Railroads say the roads have on order 455 new locomotive units, of which 445 are diesel-electric and 10 electric. Comparative figures for this date last year showed 521 units on order, 496 being diesel-electric, 10 electric, and 15 gas-turbine-electric.

3 *Were animals ever used to switch railroad cars?*

Yes, indeed. Horses often did the job until less than a century ago. Even today elephants and other animals are switching cars in some areas of the Far East. (Photo shows one such case in Japan.) Some time ago, *Railroad* published a picture of a moose switching a car on the Canadian National. Incidentally, when elephants do the switching, they push the car, not pull it. Spongy bone tissue in the forehead of the huge beasts enables them to push heavy loads without getting a headache.

4 *What is "operating ratio?"*

Operating ratio is the percentage which total operating expenses bear to total operating revenues. For instance, if a railroad's total operating revenue for a given period is $10,000,000 and if its operating expenses total $7,500,000, its operating ratio is 75 percent.

5 *What is the minimum radius for a standard-gage PCC streetcar? Also its top speed?*

It is difficult to state a minimum radius curve through which this streamlined trolley car can be operated, because many factors are involved. A rough engineering rule of thumb is that the minimum radius curve should not be less than six times the truck's wheel base. Since the PCC truck has a wheel base of 6 feet, we would say that 36 feet (measured at the center of the

Irving Snyder

Animals are still used in some places in Japan for switching. Here, an ox drags a load of logs past the switches in the yards at Tatekawa on Shikou Island.

Bill Rohde

Hoppers, gondolas, reefers, tankers, flat cars—we thought we'd seen them all—until we ran into this specially designed pickle car used on the Rutland Railway.

track) is the minimum radius curve. In service at slow speed, PCC cars probably are being operated through even shorter radius curves.

The calculated balancing speed for the PCC car on level tangent track is approximately 42 miles per hour, while the safe maximum speed is 50.

6 *Was there such a thing as "The Road of the Apostles"?*

Indeed, there was. A Texas short line, the 23-mile Bartlett & Western, bore that nickname because four of its stations were named St. Matthew, St. Mark, St. Luke, and St. John. Copies of the four Gospels hung on the walls of each depot waiting-room. The B&W was abandoned several years ago.

7 *What is the latest development in continuous welded rail?*

For the first time in North American history a new electric flash method for fabricating such rail has just been put into effect at the Santa Fe's Abajo Yard in Albuquerque, N. M. Developed in Switzerland and known as the Matisa-Schlatter electric butt-welding process, this technique is being used by the Santa Fe to weld about 27 miles of new rail for relaying a stretch of main line between Rosario and Bernalillo on the New Mexican Division. This project will cost approximately $1,400,000.

One advantage of welded rail is the elimination of the joint that is necessary every 39 feet with steel of conventional length. Service tests on rail welded by acetylene gas have proved it is practicable and money-saving. The new process will be used on about 63 miles of continuous rail on the Santa Fe system this year, the other jobs being at Waynoka, Oklahoma, a stretch 7½ miles long, and at Chillicothe, Illinois, for a distance of slightly over 28 miles.

The Matisa welding machine has a maximum capacity of about 15 welds per hour. From a stockpile of new 39-foot rails located near the forward end of the first car containing the welding unit, the rail is fed through the three cars where it is subjected to the various processes of welding, grinding, and testing. The rail then feeds directly onto a train of 31 flatcars, having a capacity of 12 strings of continuous rail, each 1440 feet long (about one-quarter mile). After that is hauled to the site where it will be laid.

8 *When did rolling stock on all standard-gage American roads have to be equipped with automatic couplers?*

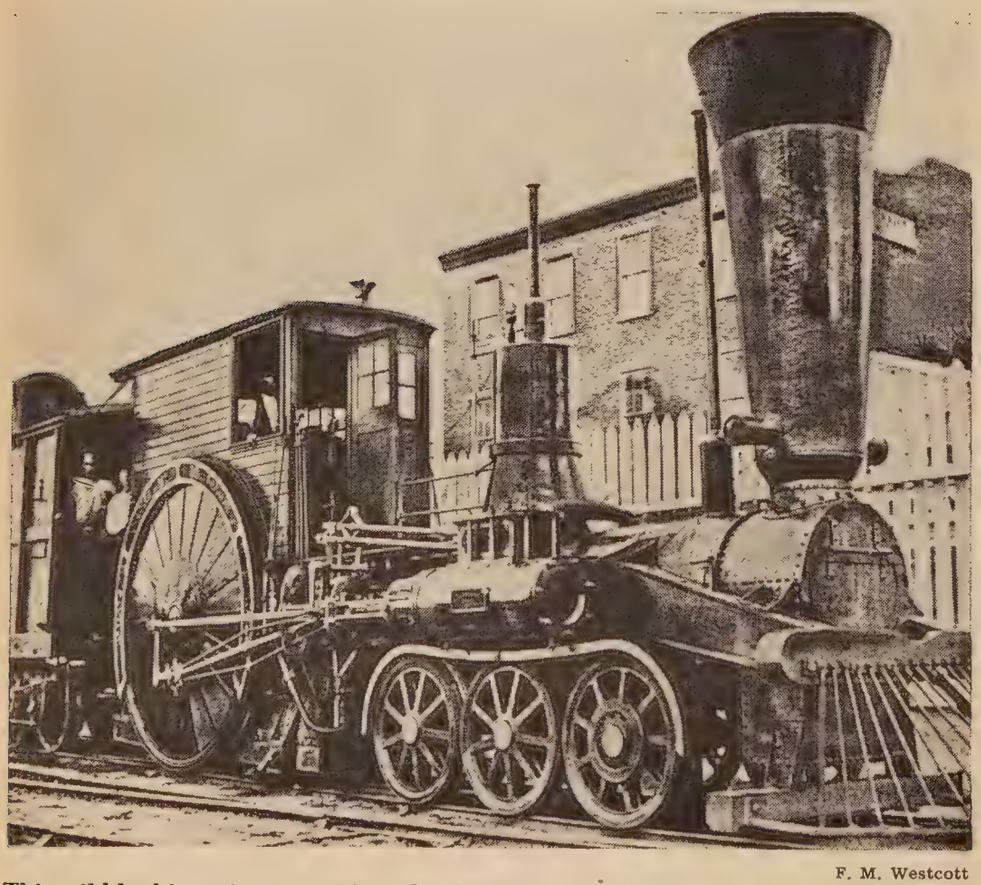
The link-and-pin coupler was outlawed for interstate train service January 1, 1898, at which time the use of the automatic coupler was made compulsory by law. The automatic type had been adopted by the Car Builders Association as early as 1887.

9 *Tell me about the* Crampton, *pioneer Camden & Amboy engine.*

This odd Stevens-type steam engine had unusual characteristics. Her driving wheels measured 96 inches across. Both drivers and truck wheels were made of wrought iron, but wood filled the spaces between the spokes. Equipped with 13x38-inch cylinders, the *Crampton* weighed 47,000 pounds. Norris Bros. built her for the C&A (now part of the Pennsylvania System) about 1847.

10 *How many locomotive types does General Electric build?*

GE builds 40 different kinds of diesel-electric, gas-turbine-electric, and straight electric locomotives for underground use as well as surface work. Among the most distinctive of those produced in 1954 were rectifier electric locomotives, which convert commercial AC power to DC through electronic tubes; special "weatherized" units for Alaska that operate in temperatures as low as 65 below zero; the largest underground electric and diesel-electric



F. M. Westcott

This wild-looking pioneer engine, the *Crampton*, ran between Camden and Amboy, N. J., in the 1840's. Her drivers were a mere 96 inches, but she still worked.

motive power; and locomotives for a steel mill's 23-inch-wide track.

This last type marked the first time so much weight and equipment (45 tons) had been crowded into such a limited space (5 feet, 8 inches wide; 8 feet, 5 inches high, and 18 feet long). In the underground field, GE recently shipped the largest mining locomotive to date, a 50-ton unit, boasting 600 horsepower, 35 feet long and 48 inches high.

11 *Is the Pennsy building a Talgo train or "Train X"?*

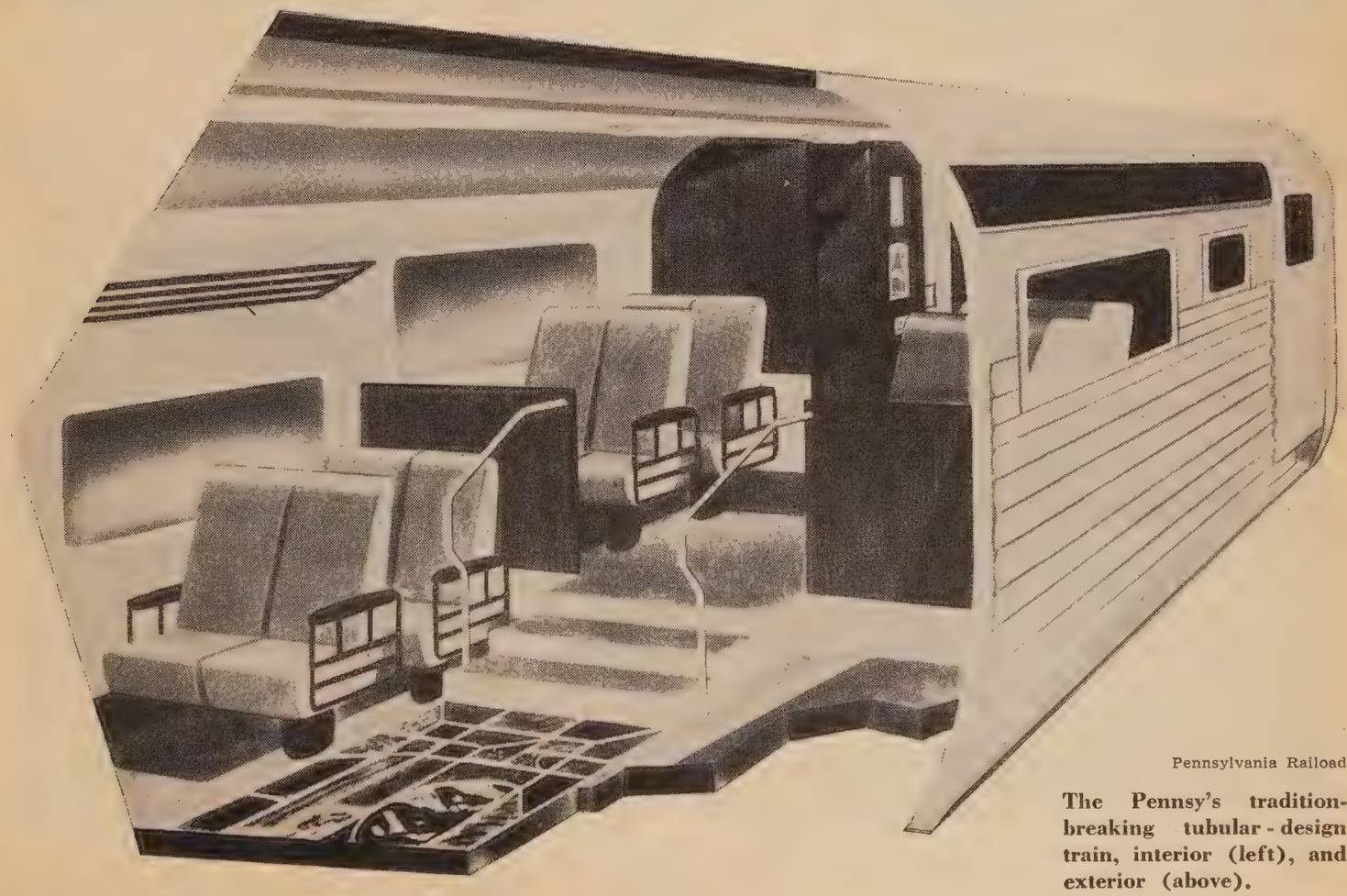
No, but it has ordered from the Budd Co., for delivery early next year, a tubular-design train which will hug the rails more closely than any train currently operating in America. The new train, powered by existing diesel or electric locomotives, is being built from a unique design calculated to provide great strength with minimum weight—and the lowest center of gravity ever engineered for railroad cars. Its seven cars will seat a grand total of 574 passengers.

PRR officials estimate it will cut the present running time by at least 15 percent. The tubular design is a complete departure from conventional rail-car-building practice. By making the body structure itself do the work of the usual steel underframe, the car can be built lower—42 inches above the rails—and its floor depressed in the center section.

The "rail-hugger" is expected to cut operating costs and permit higher speed on curves with safety and comfort. Riding on 4-wheel trucks under each end, the new cars will be only 11¾ feet high—almost two feet lower than existing coaches—and weigh only 77,000 pounds each, a 40 percent reduction, but their length will be the same, 85 feet. The new train will probably run between Pittsburgh and the Eastern Seaboard.

12 *Explain the white star that is painted on some express and baggage cars.*

The five-pointed star, six inches in diameter, indicates a baggage-express messenger car.



Pennsylvania Railroad

The Pennsy's tradition-breaking tubular-design train, interior (left), and exterior (above).

Henry R. Griffiths, Jr.

Spouting like a geyser, Oregon & Northwestern No. 1400 levels off outside Summit tunnel, bound for Hines.

Roster of the Oregon & Northwestern and the Edward Hines Lumber Co.

No.	Built	Type	Cyl.	Driv.	B.P.	Weight	T.E.
5	Alco, 1910	2-8-0	19x26	50	185	78,000	28,500
529	Bal., 1903	2-8-0	21½x30	57	185	174,530	41,360
2260	Bal., 1917	2-8-2	26x28	63	200	214,000	53,628
2261	Bal., 1917	2-8-2	26x28	63	200	214,000	53,528
1400	Alco, 1926	2-8-2	25x30	57	200	224,000	55,900

13 *What kind of locomotive was the "Holman Absurdity"?*

The so-called Holman Absurdity, built by Baldwin about 1897 and named after her inventor, was not as strangely designed as were some other engines of the time. But she did look peculiar. Built for high speed, her drivers contacted small wheels placed between them and the rail. Although this freak locomotive actually hauled trains on the Jersey Central, she often broke down and spent most of her life in the shops. She rocked like a canoe in mid-ocean, and her crews were poised ready to jump whenever she took a curve. Even so, she ran without a casualty.

14 *I understand the Pennsylvania is getting a "giant brain" machine. What does it do?*

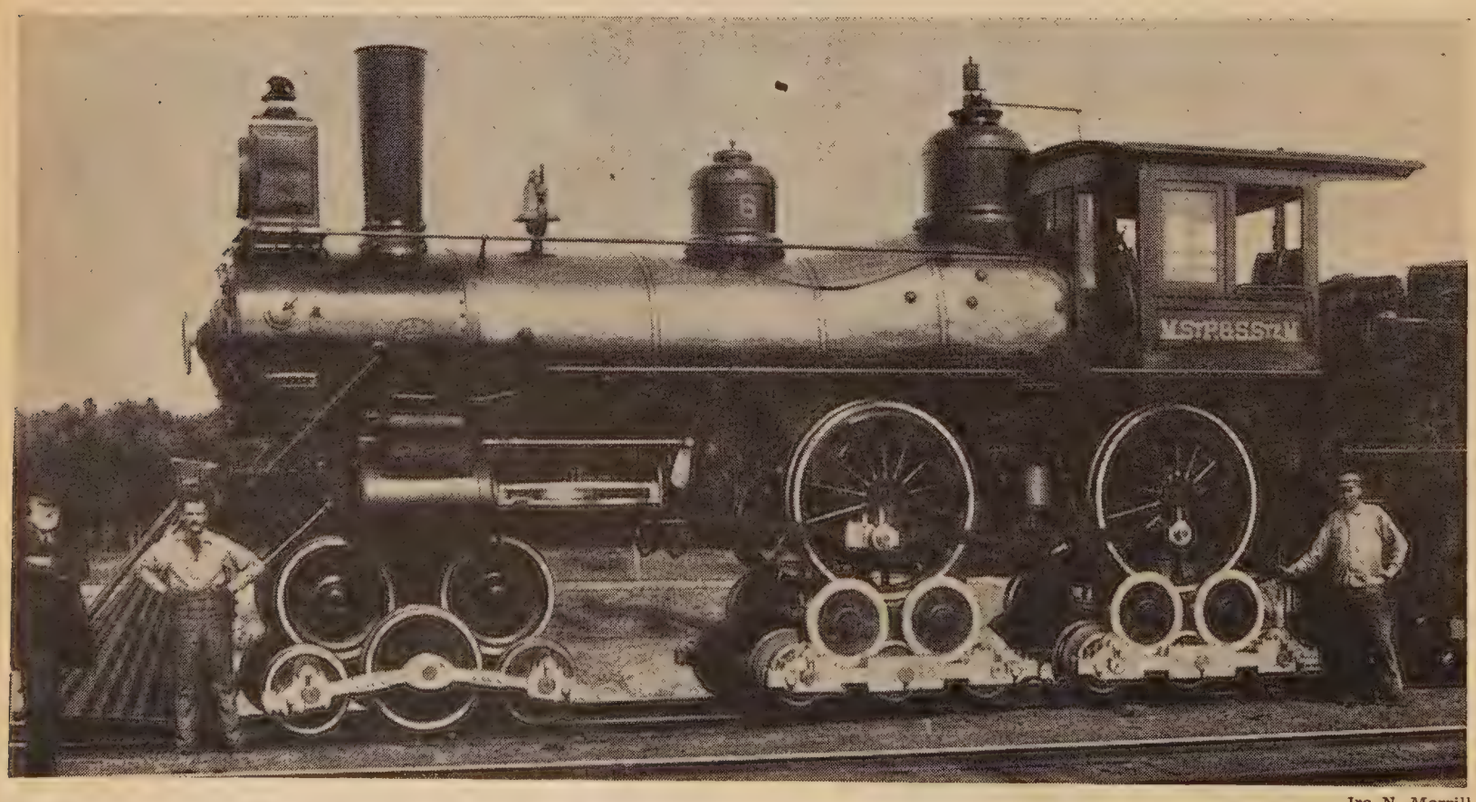
This unique computer, called "Type 705" by its manufacturers, International Business Machines, is the world's largest device of its kind. It is designed to handle the 43 million passenger tickets, 15 million freight waybills, 3 million pay drafts, 600,000 vouchers, and thousands of other forms processed by the Pennsy each year. Other electronic accounting machines have taken care of "paper work" problems over the years, but the Pennsy wants to have its figure work done even faster and more efficiently and to explore new fields of statistical information. Hence, the so-called giant brain.

15 *Please print a roster of Pittsburg & Shawmut locomotives.*

The P&S has only nine locomotives, all diesels, numbered 231 through 239, all the same type. Specifications: Built by General Motors, Electro-Motive Division, November, 1953, model SW9; two 4-wheel trucks; 12 cylinders, 8½x10 inches; wheel diameter, 40 inches; weight, 248,000 pounds; horsepower, 1200; and tractive effort, 62,000 pounds at 25 percent adhesion.

16 *What is a pay-train? Are any left in North America?*

A pay-train is a locomotive and one car used regularly by the road's paymaster to traverse a certain route in



Ira N. Morrill

The Minneapolis, St. Paul & Sault Ste. Marie had its own version of "Holman's Absurdity," a freak engine whose drivers operated a series of smaller wheels separating them from rails. To nobody's surprise but her inventor's, she wasn't a huge success.

order to pay the employes in that area. Before the war there were many such trains, heavily guarded, of course. The only one left, so far as we know, runs on the Canadian Pacific. Details of its operation and itinerary are necessarily kept secret.

17 *Which was the first streamlined train?*

The Union Pacific's M-10,000, now called the *City of Salina,* was the first streamliner put into service. It started its run between Salina, Kan., and Kansas City, Mo., on January 31, 1935. An aluminum alloy train, it was equipped with a distillate-electric motive-power unit.

18 *Could we have a brief history of the Mammoth Cave Railroad?*

Yes, why not? Mammoth Cave trains ran between Glasgow Jct. and Mammoth Cave, Ky., 8.7 miles, for almost 50 years. The demand for transportation to and from this famous cave prompted the building of the line in 1886. Most of its traffic resulted from the important connection with other short-line railroads and with the Louisville & Nashville at Glasgow Jct.

The trains carried passengers through rugged country over many trestles and sharp curves. Early equipment consisted of two "dummy" locomotives—one of which, the *Hercules,* now stands in retirement in front of the Mammoth Cave Hotel—two combination cars, and two coaches. All the cars were wooden and heated with coal stoves. In summer, many trips were made, depending upon the number of Cave visitors, but in the winter there was only one round trip daily.

Generally, the road was busy, and returned a fair profit to its owners. The only freight it handled was farm produce, farm implements, and food supplies for the Cave's hotel. Section forces came from the neighboring farms and worked intermittently on the line between crops.

In 1913 the road permitted the L&N to run sleeping cars and other through equipment over the Mammoth Cave's route to the Cave itself. By 1928, after the short line had been extended to reach another cave, it entered on lean years. The second cave did not draw the numbers of tourists anticipated. Besides, visitors to Mammoth Cave were beginning to find it easier to travel by motor car. In time, the MC was sold to F. L. Gallup, who, in turn sold it to the Mammoth Cave National Park Association. In 1931 the new owners discontinued operation and took up the rails.

19 *I would like information on the Canadian National's self-propelled diesel car RDC-1.*

The RDC-1 was placed in service on the CNR's 114-mile run in Quebec province between Levis and Riviere du Loup in July, 1954. Budd Co. built this lightweight, self-propelled unit of stainless steel. It has an engineer's cab at each end, seats 90 passengers, and is called the *Railiner.*

Powered by two 275-horsepower diesel engines, the RDC-1 can reach a top speed of of 90 miles per hour. It has a rapid but smooth acceleration of 1.4 mph per second. From a standing start it can cover five miles in five minutes. Disc brakes provide joltless fast braking. Traveling at 25 mph, the car can be brought to a complete stop within 1,900 feet.

The *Railiner* weighs 116,880 pounds, is 85 feet long, and has fabricated four-wheel undercarriages. This type of car maintains the same frequency of service as the steam-hauled trains which it has replaced.

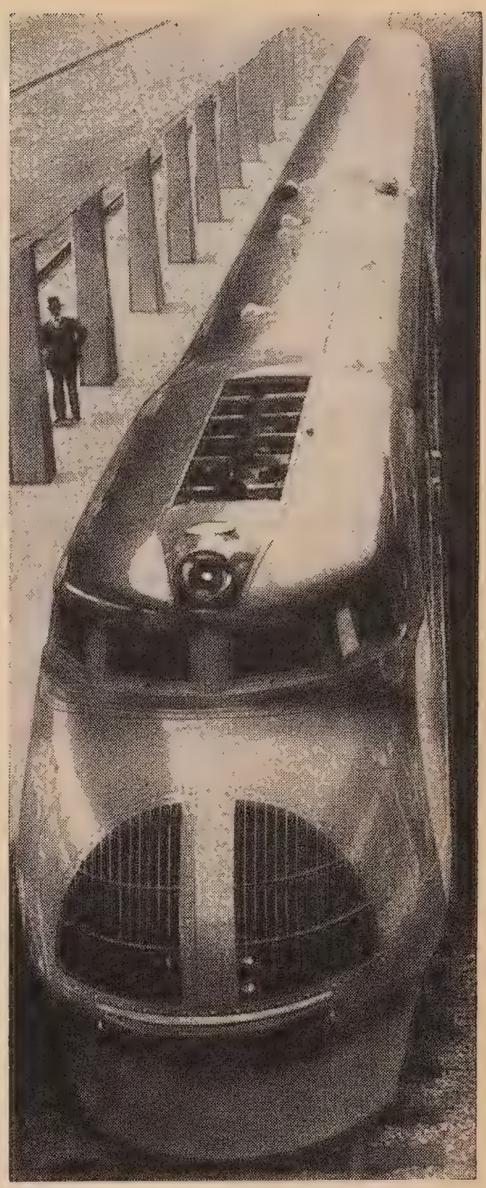
20 *I understand that Illinois Central locomotive No. 382, in which Casey Jones died, was involved in two other wrecks and renumbered after each. Is that true?*

Yes. The IC rebuilt Casey's "old girl" and put her back into service on its No. 1 passenger train, the *Cannonball,* but she did not perform well, and the crews swore she was jinxed. She had several accidents, some fatal. Once, ironically, she turned over beside the Memphis Coffin Works. The company changed the so-called hoodoo engine's number successively to 212, 2012, and finally 5012, but her luck did not change. In 1933 she was scrapped. On her way to the boneyard, Casey's old 382 took one last fling, jumping the rails again and sending another fireman to glory.

21 *Do all trains entering and leaving Grand Central Terminal, New York, have to pass through the Pennsylvania Station? Are there other outlets for railroad trains leaving the big city?*

None of the trains operating in or out of Grand Central are routed through Penn Station. During World War II, however, some trains did run between the two stations. As for other rail-traffic outlets, the Hudson & Manhattan, electrically operated, has frequent service between Hudson Terminal and 33rd Street, both in New York City, and Jersey City, Hoboken, and Newark, N. J. Several others roads serve New York City through ferry connections to Jersey City and Hoboken.

The Long Island has passenger terminals at Penn Station and on Flatbush Ave., Brooklyn, and a freight terminal in Long Island City. Staten Island freight line (B&O) connects the metropolis with New Jersey. New Haven freight trains enter and leave Mott Haven yards in the city's Bronx section. New York Central freights run alongside the Hudson River to and from St. Johns Park terminal in downtown New York. Various car floats also serve as rail freight outlets for the big city. Considering the city is an island, trains move in and out with ease.



Granddaddy of today's streamliners was Union Pacific's lightweight, distillate-powered M-10,000, the *City of Salina.*

RUNNING EXTRA

WE QUOTE Morris W. Abbott, 23 Bedford Ave., Milford, Conn.: "Sweet young things with lovely faces and diplomas in journalism can't take the place of men who know rails."

Evidently Mr. Abbott thinks he is living in the 1890's. Today, 4 percent of America's railroaders are women. Reference librarian of *Railway Age* is Hannah Stone. Managing editor of *Trains* is Rosemary Entringer. Special features editor of *Modern Railroads* is Nancy Ford; assistant editor, Nora Sampson. Editor of *Baltimore & Ohio Magazine* is Virginia Tanner; associate editor, Inez deVille. Librarian in charge of the world's greatest railroad library —owned by the Association of American Railroads at Washington, D. C.— is Elizabeth Cullen.

We can't say how many of these gals are "sweet young things wth lovely faces and diplomas in journalism," but we do know that each one is a recognized authority on railroad facts.

Furthermore, women have held just about every kind of job the railroads offer—to mention a few, railroad company president, chairman of the board, train dispatcher, switchtender, lawyer, crane operator, and even locomotive engineer.

AUSTRALIA and New South Wales have quite a bit of standard-gage mileage and should have been so listed in our May '55 item about gages, says Arthur Davis, 7629 Lindley Ave., Roseda, Calif.

LOCOMOTIVES with blind sides were pictured in our April issue. Says Ivan W. Saunders, 472 Belonda St., Pittsburgh 11, Pa.: "For many years the B&O ran an 0-6-OT shop engine at Ivorydale shops in Cincinnati, with one blank side—the coal pocket—and the other side having the usual window. I have a negative of this goat. Originally built by N. J. Locomotive Works for the B&O Southwestern as No. 5, she was renumbered No. 320, then 1120 (Class D-22), and junked in 1953.

COMMENT on our recent item about America's lowest point reached by trains comes from J. L. Watson, power-plant engineer at Los Angeles Union Station, employed by the Santa Fe for over 32 years:

"When the Colorado River broke into that spot in 1905, the Southern Pacific track was in the lowest spot, 272.5 feet below sea level, where a salt works was located. The ground there was only about 6 feet higher than Death Valley, hundreds of miles away, 278.5 feet below sea level, the lowest area on our continent. Only one other railroad spot in the world is lower. The Palestine Railways has a branch that runs to the Dead Sea, 808 feet below sea level."

CLARE E. PIERCE, Box 6191, Cleveland, O., writes regarding the old Arcadia & Betsey River, mentioned in this section. A letter from Edward DeVito had located the A&BR in the Greater Winnipeg Water District, but Mr. Pierce says it was in the north end of Michigan's lower peninsula, many miles from Winnipeg. Oh, well, we can't expect everybody to be accurate all the time.

TELLTALE pictured in our May issue evoked this comment from "Carload Andy" Ospring, 1302 N. Ontario, Burbank, Calif.

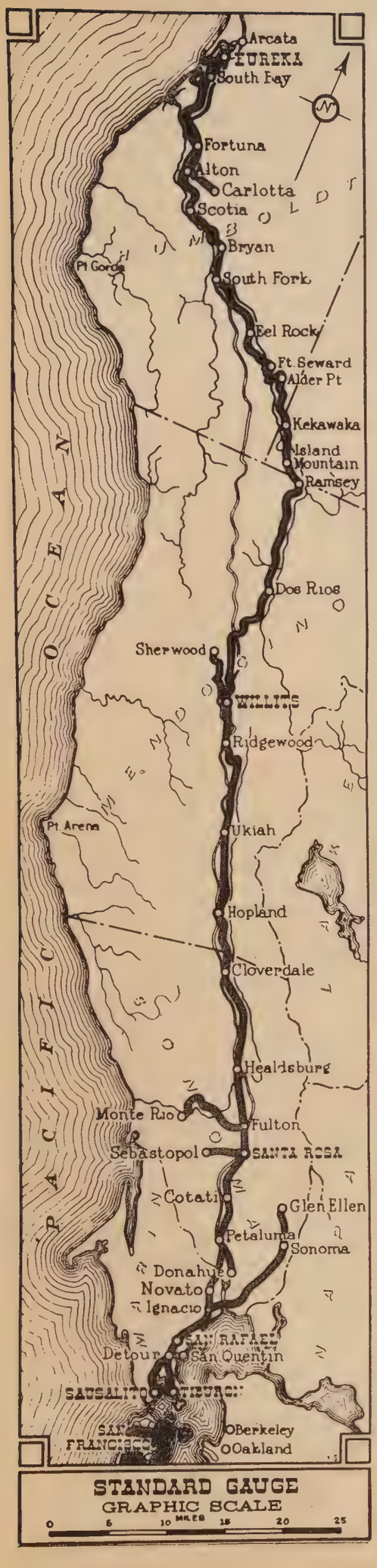
"Telltales have been used almost from the day the first railroad tunnel was built, more than a century ago. I had several narrow escapes while firing on the Vandalia (now part of PRR) when I had to climb over the coal pile to measure our water. Telltales saved me."

OUR RECENT Chicago & Alton item appealed to Tom R. Spooner, 1147 N. Dearborn St., Chicago 10, Ill., whose grandfather used to be the road's chief engineer. "I have an old undated photo," he states, "made by A. V. Hall, Chicago, showing Grandpa standing beside his C&A engine, No. 509, on a turntable, at the time he was a fireman. With him were Engr. A. Trotter and Fireman P. D. Chesher. I'd like to hear from anyone who knew my grandfather or can shed light on the photo."

Henry R. Griffiths, Jr.

Union Pacific Challenger type engine, No. 3960, gives the diesel-powered *City of San Francisco* a head over Sherman Hill.

ALL-TIME ROSTER OF THE NORTHWESTERN PACIFIC

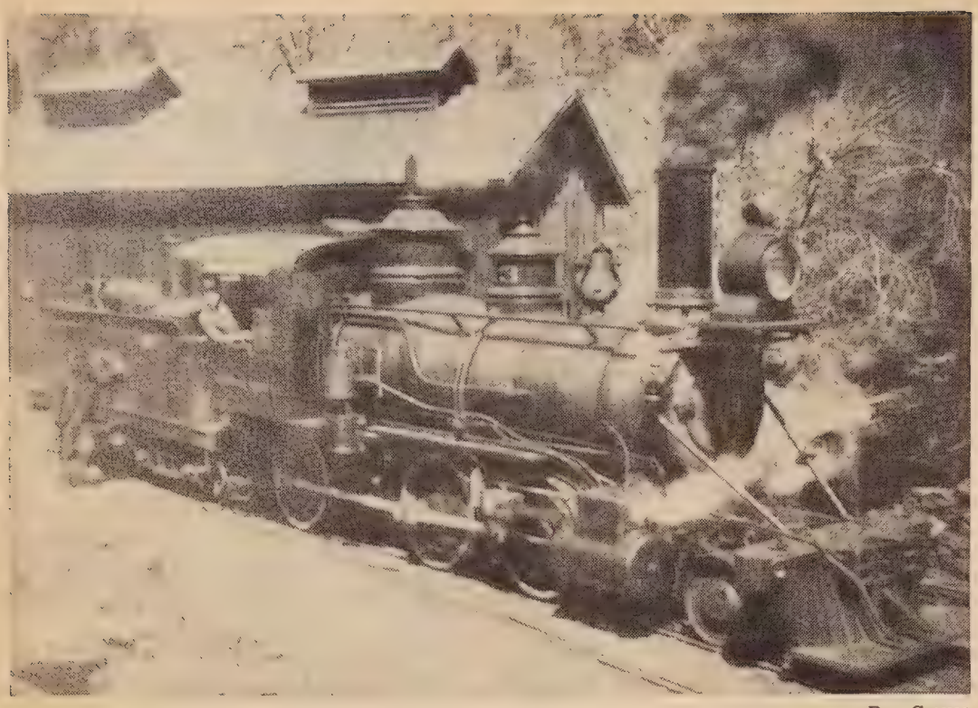


THE NORTHWESTERN PACIFIC was incorporated on January 8, 1907. It was a consolidation of the Southern Pacific with its California Northwestern and North Shore railroads, the Santa Fe with its San Francisco & Northwestern and Fort Bragg & Southeastern railroads, and the Eureka & Klamath River.

San Francisco & Northwestern (Santa Fe-owned). Incorporated May 12, 1903. It acquired on July 1, 1903, the California & Northern, Eureka to Arcata, 8.26 miles; the Eel River & Eureka, Eureka to Burnells, 22.91 miles; the California Midland, Burnells to Van Duzen River, 3.45 miles; and

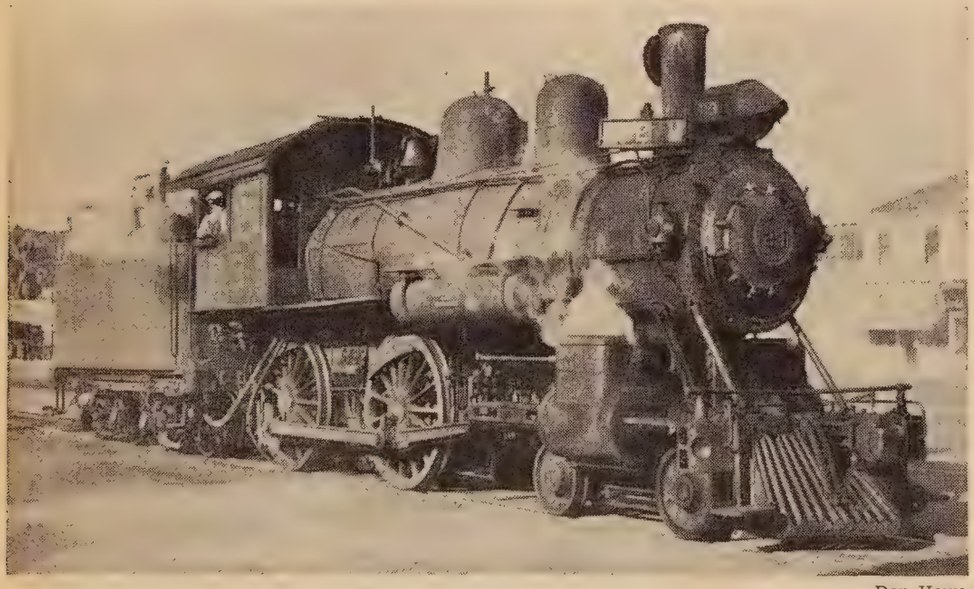
Southern Pacific

Headed by No. 183, a NWP freight consist rumbles over the trestles at the foot of Scotia Bluff. With dieselization, the 183 finally went into retirement.



Roy Graves

North Shore No. 13 spewed steam and smoke for a photographer shortly before the NWP took her over in 1907. Renumber 195, the little Mogul was scrapped in 1910.



Don Howe

During World War II, NWP headlights were equipped with blackout shields like the one 23 sported as she backed up to take on train No. 2 at San Rafael in 1942.

Jinxed engine, NPC 9, the *Milton S. Latham*, cracked up at Austin Creek in 1894. Rebuilt as 17, she reduced herself to scrap in the Corte Madera tunnel in 1900.

the Pacific Lumber Company Railroad from Alton to Camp Nine, 15.3 miles, plus 2.3 miles of line constructed from Camp Nine south.

Fort Bragg & Southeastern (Santa Fe-owned). Incorporated March 25, 1903, to build a line from Fort Bragg to Healdsburg. By June 30, 1906, it had in operation a line from Keene's Summit to Wendling, 8.27 miles, and a branch from South Fork to Clearbrook, 1 mile. The FB&SE also operated the Albion & Southeastern, incorporated on May 8, 1902, which by June 30, 1906, had in operation a line from Albion to Keene's Summit, 14.58 miles. Later a short section was built between Wendling and Christine. But the FB&SE never connected with any other road.

North Shore (Southern Pacific-owned). Successor to the narrow-gage North Pacific Coast as of July 10, 1902. Mileage 93.31. The NPC, incorporated on December 19, 1871, leased the Saucelito Terminal of the Saucelito Land & Ferry Company in 1872, the San Rafael & San Quentin on March 11, 1875, the North Western (Duncan Mills to Cazadero) on April 1, 1886, and the San Francisco, Tamalpais & Bolinas in 1889 (Bay Junction to Mill Valley).

California Northwestern (Southern Pacific-owned). Chartered March 1, 1898. Incorporated on March 17, 1898, by the interests of the San Francisco & North Pacific, the CNW leased all SF&NP properties for twenty years beginning September 20, 1898. A continuation of the SF&NP main line, constructed by CNW from Ukiah to Sherwood, was placed in operation May 1, 1904. The SF&NP, organized on November 17, 1869, had its start in the San Francisco & Humboldt Bay, organized on November 2, 1865, to build from Petaluma, north. On June 29, 1877, the Fulton & Guerneville and the Sonoma & Marin were consolidated with the SF&NP, to be followed in March, 1889, by the Sonoma Valley, the Marin & Napa, the Cloverdale & Ukiah, the Sonoma & Santa Rosa, and the San Francisco & San Rafael.

Eureka & Klamath River. Built 1896-1905 by the Humboldt Bay & Trinidad, 26.37 miles. The HB&T was absorbed by the E&KR, leased in January, 1904, to the Oregon & Eureka, and merged with the NWP on January 8, 1907. The O&E continued lease of the operation until 1911.

NWP STANDARD-GAGE LOCOMOTIVES

4-4-0 (AMERICAN) TYPE

Number	Former Numbers	Class	Builder	Builder's Number	Year	Cylinders	Drivers	Total Weight	Weight on Drivers	Tractive Effort	Boiler Pressure	Disposition
1[1]	FB&SE 1st 1					12x18	41		71,000			
2nd 1[2]	1st NWP 3, SF&NW 2, ER&E 2 "Eureka"	Un	Baldwin	7400	1884	13x22	49	45,800	31,000	7317	125	R 12-4-1916
2	SF&NW 1, ER&E 1	Un	Baldwin	7013	1883	13x22	50	54,600	31,000	7317	125	R 7-15-1920
2nd 3[3]	O&E 6, E&KR6	Un	Baldwin	8947	1887	14x24	57	64,400	40,380	10,000	145	R 8-1-1923
4	SF&NP 1, SF&SJ 2 "San Jose"	Un	R. Norris	1009	1862	13x22	57	52,900	34,300	7760	140	R 7-15-1920
5	SF&NP 5 "Santa Rosa"	Un	Booth	17	1873	14x22	63	56,500	37,000	8276	140	S 6-30-1911
6	SF&NP 2 "J. G. Downey"	Un	Booth	14	1870	14x22	64	60,500	39,000	8145	140	S 7-31-1915
2nd 7	SF&NP 3 "W. J. Ralston"	Un	Booth	15	1870	14x24	64	64,400	42,000	8740	140	R 4-17-1920
8	SF&NP 8 "San Rafael"	Un	Baldwin	5485	1881	15x24	63	71,000	49,000	9470	145	R 5-1-1925
9	SF&NP 9 "Marin"	E-43	Grant	1664	1883	16x24	59	86,300	54,000	12,390	140	SB 5-15-1938
10	SF&NP 10 "Healdsburg"	E-44	Grant	1665	1883	16x24	59	84,200	52,000	12,390	140	S 6-10-1937
11	SF&NP 6 "Cloverdale"	Un	Grant		1878	16x24	63	70,250	45,000	11,600	140	S 5-15-1912
12	SF&NP 7 "Petaluma"	Un	Grant		1878	16x24	63	70,250	45,200	11,600	140	R 11-11-1926
13	SF&NW 6, AT&SF 07, 45, 25 "Colorado Springs"	Un	Baldwin	3831	1875	16x24	57	74,400	47,300	13,280	145	R 4-8-1929
14	SF&NP 14 "Tiburon"	E-45	Grant		1888	16x24	62	88,550	57,900	12,630	150	S 9-26-1936
15	1st NWP 7, SF&NW 7, AT&SF 049, 103, NM&SP 503-203 "C. C. Jackson"	Un	Baldwin	4416	1878	17x24	61	79,240	49,000	13,535	140	R 10-21-1930
16	SF&NW 4, ER&E 4	Un	Penn RR	1031	1880	17x24	59	83,600	51,000	13,990	140	R 10-21-1930
17	SF&NP 17 "Lytton"	E-46	Rogers	4155	1889	17x24	63	87,300	55,300	13,100	140	S 9-21-1935
18	SF&NP 16 "Vichy"	Un	Rogers	4154	1889	17x24	63	87,300	55,300	13,100	140	S 8-8-1910[4]
19	SF&NP 12 "Peter Donahue"	E-47	Rogers	3305	1884	18x24	61	93,800	62,000	17,880	165	S 7-13-1937
20	SF&NP 13 "Tom Rogers"	E-47	Rogers	3306	1884	18x24	61	91,300	60,900	17,880	165	S 9-26-1936
21	SF&NP 24	E-48	Baldwin	24035	1904	18x24	69	117,350	79,150	17,240	180	S 6-10-1937
22		E-49	American	44959	1908	18x24	69	128,500	79,500	17,240	180	S 10-1-1938
23		E-49	American	44960	1908	18x24	69	128,500	79,500	17,240	180	S 3-14-1949
51		E-50	American	54580	1914	19x26	63	158,500	105,500	25,330	200	S 2-28-1938
52		E-50	American	54581	1914	19x26	63	158,500	105,500	25,330	200	S 2-28-1938
53		E-50	American	54582	1914	19x26	63	158,500	105,500	25,330	200	S 5-6-1938
54		E-50	American	54583	1914	19x26	63	158,500	105,500	25,330	200	S 4-30-1938

0-4-0 TANK TYPE

99	SF&NP 99	Un	E. Jardine		1887	6x12		11,000	11,000	1,468	125	Sold, 2-18-1910[8]

4-6-0 (TEN-WHEELER) TYPE

101	SF&NP 18 "Skaggs"	Un	Rogers	4212	1889	16x24	57	94,400	73,100	12,330	140	R 9-30-1928
102	SF&NP 15 "Eureka"	Un	Grant		1888	18x24	55	102,000	78,000	16,820	140	R 5-31-1929
103	SF&NP 20	T-43	Richmond	3304	1901	18x24	57	120,260	92,260	19,710	170	S 12-15-1935
104	CNW 31	T-43	Richmond	3303	1901	18x24	57	120,260	92,260	20,870	180	S 9-26-1936
105	SF&NP 21	T-44	American	25620	1902	19x26	57	134,000	108,000	25,200	180	S 7-17-1934
106	SF&NP 25, CNW 32	T-44	American	25621	1902	19x26	57	134,000	108,000	25,200	180	S 3-10-1934
107	SF&NP 22	T-44	Baldwin	23933	1904	19x26	57	136,300	110,000	25,200	180	S 4-10-1937
108	SF&NP 23	T-44	Baldwin	23951	1904	19x26	57	136,300	110,000	25,200	180	S 10-21-1948
109	CNW 30, 1	T-45	Baldwin	18179	1900	19x26	57	130,300	105,150	25,200	180	S 10-14-1948
110	SF&NP 19	T-45	Baldwin	17759	1900	19x26	57	130,300	105,150	25,200	180	S 4-10-1937
111		T-46	American	44955	1908	19x26	57	137,800	109,600	25,200	180	S 10-31-1949
112		T-46	American	44956	1908	19x26	57	137,800	109,600	25,200	180	Held for R&LHS Museum
113		T-46	American	44957	1908	19x26	57	137,800	109,600	25,200	180	S 10-3-1947
114		T-46	American	44958	1908	19x26	57	137,800	109,600	25,200	180	S 2-6-1947
130		T-47	American	49089	1910	20x28	63	173,000	130,400	30,200	200	S 7-18-1938
131		T-47	American	49090	1910	20x28	63	173,000	130,400	30,200	200	S 7-18-1938
132		T-47	American	49091	1910	20x28	63	173,000	130,400	30,200	200	S 10-1-1938
133		T-47	American	49092	1910	20x28	63	173,000	130,400	30,200	200	S 10-31-1938
134		T-48	American	51536	1912	20x28	63	175,500	132,000	30,200	200	S 12-31-1940
135		T-48	American	51537	1912	20x28	63	175,500	132,000	30,200	200	S 11-30-1940
136		T-49	American	54578	1914	20x28	63	180,000	135,500	30,222	200	S 10-31-1940
137		T-49	American	54579	1914	20x28	63	180,000	135,500	30,222	200	S 12-31-1940
138		T-49	American	54975	1914	20x28	63	180,000	135,500	30,222	200	S 12-31-1940
139		T-50	American	54976	1914	20x28	63	180,000	135,500	30,222	200	S 3-27-1947
140		T-50	American	54977	1914	20x28	63	180,000	135,500	30,222	200	SB 8-15-1954[6]
141		T-50	American	54978	1914	20x28	63	180,000	135,500	30,222	200	S 3-31-1954
142		T-51	Baldwin	55356	1922	20x28	63	181,670	137,720	30,220	200	S 8-7-1953
143		T-51	Baldwin	55473	1922	20x28	63	181,670	137,720	30,220	200	S 12-28-1953
170	LV&T 4	T-52	Baldwin	30105	1907	21x26	57	186,756	142,000	32,490	190	S 12-21-1950
171	LV&T 5	T-52	Baldwin	30106	1907	21x26	57	187,120	141,700	32,490	190	S 12-14-1946
172	LV&T 8	T-52	Baldwin	31094	1907	21x26	57	188,790	145,500	32,490	190	S 11-18-1948
178	BF&GF 11	T-53	Baldwin	29726	1906	21x28	63	172,840	144,393	31,650	190	S 1-21-1954
179	NWP 129, LV&T 12	T-54	American	44753	1907	21x28	63	189,280	142,480	30,220	200	S 8-4-1952
180	NWP 160	T-55	American	54979	1914	21x28	57	196,500	148,500	36,830	200	S 9-21-1952
181	NWP 161	T-55	American	54980	1914	21x28	57	196,500	148,500	36,830	200	LSP 10-15-1953
182		T-59	Baldwin	55351	1922	21x28	57	196,980	149,770	36,830	200	LSP 8-20-1954
183		T-59	Baldwin	55470	1922	21x28	57	196,980	149,770	36,830	200	R 2-8-1955
184		T-59	Baldwin	55471	1922	21x28	57	196,980	149,770	36,830	200	S 11-23-1953

2-6-2 TANK TYPE

201	CNW 33	Un	Baldwin	22446	1903	17x22	47	117,100	84,000	18,400	160	R 10-21-1930
202	CNW 34	PR-3	Baldwin	22474	1903	17x22	47	114,800	84,000	18,400	160	Sold, 10-31-1937

2-4-2 TANK TYPE

225	FB&SE 2nd 1	CO-1	Porter		1888	12x18	41	52,070	30,410	6,717	125	Sold, 10-31-1937

0-6-0 SWITCHER TYPE

226	FB&SE 2, AT&SF 2232, 122	Un	Hinkley		1880	16x24	52	70,900	70,900	14,450	130	S 1910
227		S-20	American	48037	1910	19x24	50	124,500	124,500	23,560	160	S 11-5-1948
228		S-20	American	48038	1910	19x24	50	124,500	124,500	23,560	160	S 1-27-1949
229		S-21	American	54981	1914	19x24	50	138,800	138,800	26,510	180	S 10-14-1948
230		S-21	American	54982	1914	19x24	50	138,800	138,800	26,510	180	S 11-30-1948
231		S-21	American	54983	1914	19x24	50	138,800	138,800	26,510	180	S 6-21-1950

SHAY

251	NWR 1, CNW 32	SH-1	Lima	909	1904	13½x15	40	213,500	213,500	27,630	170	Sold, 1-1-35[7]

HEISLER

255[8]	HL 7, JRL 7	Un	Heisler	1254	1912	16½x14	40	145,900	145,900	24,800	180	Sold, 2-27-1924[9]

2-6-0 (MOGUL) TYPE

300	SP 1714, 2140	M-4	Cooke	2624	1901	20x28	63	146,000	126,000	28,710	190	S 11-18-1936
301	SP 1716, 2142	M-4	Cooke	2626	1901	20x28	63	146,000	126,000	28,710	190	S 11-18-1936
351	NWP 151, SF&NW 3, ER&E 3 "Defender"	Un	Baldwin	8776	1887	13x22	39	51,800	36,000	10,530		S 9-20-1916
352	NWP 152, SF&NW 5, ER&E 5, AT&SF 0179, GS&SF 314, 65	Un	Baldwin	8092	1886	17x24	55	86,800	70,000	16,078	150	R 5-31-1929
353	NWP 153	M-22	American	45284	1908	18x24	57	114,500	92,800	20,300	175	S 12-15-1935
354	NWP 154	M-22	American	45285	1908	18x24	57	114,500	92,800	20,300	175	S 9-12-1935

[1]Number reserved for this engine, but never applied. [2]Renumbered 1911. [3]Acquired 1911. [4]Destroyed in wreck near Ignacio. [5]North Bend Lumber Co. [6]At Tiburon, Calif. [7]To Mason, Walsh, Atkinson & Kerr. [8]Acquired 1-21-1922. [9]Shaw-Bertram Lumber Co., Klamath Falls, Ore.

LOCOMOTIVES OF THE SAN FRANCISCO & NORTH PACIFIC THAT DID NOT REACH THE NORTHWESTERN PACIFIC NUMBERING

4-4-0 (AMERICAN) TYPE

4	"Geyser"	Un	Booth	16	1873	14x24	64	64,400	42,000	8,740		S 1904
11	"Ukiah"	Un	Booth	30	1874	16x24	63	70,000	45,000	11,600		S 8-18-1907
131[1]	CP 131 "Greyhound"	Un	Rhode Island	76	1868	15x22	56	60,000	36,000			S before 1892
132[2]	CP 132 "Deerhound"	Un	Rhode Island	77	1868	15x22	56	60,000	36,000			Resold[3]

[1]Acquired 1-1872. [2]Acquired 4-1872. [3]To CP, rebuilt as 185 in 1884, scrapped 7-1895 as 1155.

NWP NARROW-GAGE LOCOMOTIVES

Number	Former Numbers	Wheel Arrangement	Builder	Number	Year	Cylinders	Drivers	Weight	Tractive Effort	Disposition
80	NWP 7, NS 7, NPC 7 "Tamalpais"	4-4-0	Baldwin	3721	1875	12x16	42	44,400	7,288	S 5-1-1908
81	NWP 4, NS 4, NPC 4 "Olema"	4-4-0	Baldwin	3629	1874	12x16	42	44,000	6,462	S 5-1-1908
82	NWP 11, NS 11, NPC 11, "Marin"	4-4-0	Baldwin	3842	1876	12x16	42	44,400	6,462	S 6-30-1911
83	NWP 3, NS 3, NPC 3 "Tomales"	4-4-0	Baldwin	3722	1875	12x16	42	44,000	7,288	S 5-1913
84	NWP 20, NS 20, NPC 20	4-4-0	NPC	1	1900	13x18	47	49,400	7,700	R 7-15-1920
86	NWP 19, SPC 15	4-4-0	Baldwin	7236	1884	14x18	52	47,200	7,360	Acquired from SPC 7-28-1907, sold DML&L 6-24-20, S 1926
87	NWP 10, SPC 10	4-4-0	Baldwin	4960	1880	14x18	49	43,600	9,070	Acquired from SPC 12-9-1907, S 11-19-1917
88	NWP 8, NS 8, NPC 8, "Bully Boy"	0-6-6	Mason	584	1877	12x18	37	48,400	7,511	S 1911
89	NWP 2, NS 2, NPC 2 "San Rafael"	0-4-4	Mason	537	1874	12x16	42	40,000	7,404	S 1911
90	NWP 15, NS 15, NPC 15	4-4-0	Brooks	1886	1891	15x20	48	70,100	11,160	S 12-15-1935
91	NWP 16, NS 16, NPC 16	4-4-0	Brooks	2421	1894	15x20	48	70,100	11,160	Sold, S 10-17-1934
92	NWP 14, NS 14, NPC 14	4-4-0	Brooks	1885	1891	16x20	48	70,900	13,600	Sold, S 10-17-1934
93	NWP 85, 17, SPC 14	4-4-0	Baldwin	7249	1884	14x18	52	47,200	8,060	Acquired from SPC 7-14-1907, sold, S 10-17-1934
94	NWP 144, 21, SPC 20	4-6-0	Baldwin	8486	1887	16x20	50	74,900	12,430	Acquired from SPC 1-2-1908, S 12-15-1935
95	NWP 145, 18, NS 18, NPC 18	4-6-0	Brooks	3418	1899	16x22	55	79,400	14,790	S 12-15-1935
195	NWP 13, NS 13, NPC 13	2-6-0	Baldwin	6611	1883	14x18	39	54,000	10,092	S 12-31-1910
321	NWP 40, NS 40, D&RG 44, "Texas Creek"	2-8-0	Baldwin	4974	1880	15x18	36	56,000	13,698	Purchased, 1903, from D&RG, S 12-31-1910
322	NWP 33, NS 33, DSS&A 33, H&C 2, "Tamarack"	2-8-0	Baldwin	7677	1885	16x20	37	60,000	17,318	Purchased, 1903, from DSS&A, R 9-30-1911
323	NWP 31, NS 31, DSS&A 31, H&C 3, "Oscelo"	2-8-0	Baldwin	7676	1885	16x20	37	60,000	17,318	Purchased, 1903, from DSS&A, S 7-31-1915

The NWP purchased 3 narrow-gage steam dummies used by the contractor building the Baltimore Park-Greenbrae cut-off in 1908. Bearing NWP numbers 23, 24 and 25, they were used on the SQ&SR Line for a short time and scrapped.

NORTH SHORE ENGINES THAT DID NOT REACH THE NORTHWESTERN PACIFIC NUMBERING

21	NPC 21	4-4-0	NPC	2	1901	13x18	47	49,400		Built from parts of NPC 5, 1st cab-in-front engine. S 1905
22	NPC 22, DL 6, NPC 6 "Valley Ford"	4-4-0	Baldwin	3664	1874	12x16	42	44,400	6,462	Leased to DL, 1899. Returned 1901, numbered 22. S 1911

NORTH PACIFIC COAST ENGINES THAT DID NOT REACH THE NORTH SHORE NUMBERING

1	"Saucelito"	2-6-0	Baldwin	3495	1873	12x16	40	40,000	Sold, L. E. White Lbr. Co., Elk, Calif.
5	"Bodega"	4-4-0	Baldwin	3703	1875	12x16	42	44,000	S 1897—Parts used in NS 21
10	"Bloomfield"	4-4-0	Baldwin	3840	1876	12x16	42	44,400	Sold, 1895, Ferrocarril Occidental de Guatemala No. 51.
12	"Sonoma"	4-4-0	Baldwin	3843	1876	12x16	42	44,400	Sold, 1876, Nevada Central No. 5. Now stored by R&LHS.
17	NPC 9 "Milton S. Latham"	4-4-0	Baldwin	3749	1875	12x16	42	44,400	Wrecked Austin Creek, 1-15-1894, as No. 9. Rebuilt as No. 17 in 1895. Wrecked in Corte Madera Tunnel. S 1900

SOUTHERN PACIFIC DIESELS ASSIGNED TO THE NORTHWESTERN PACIFIC

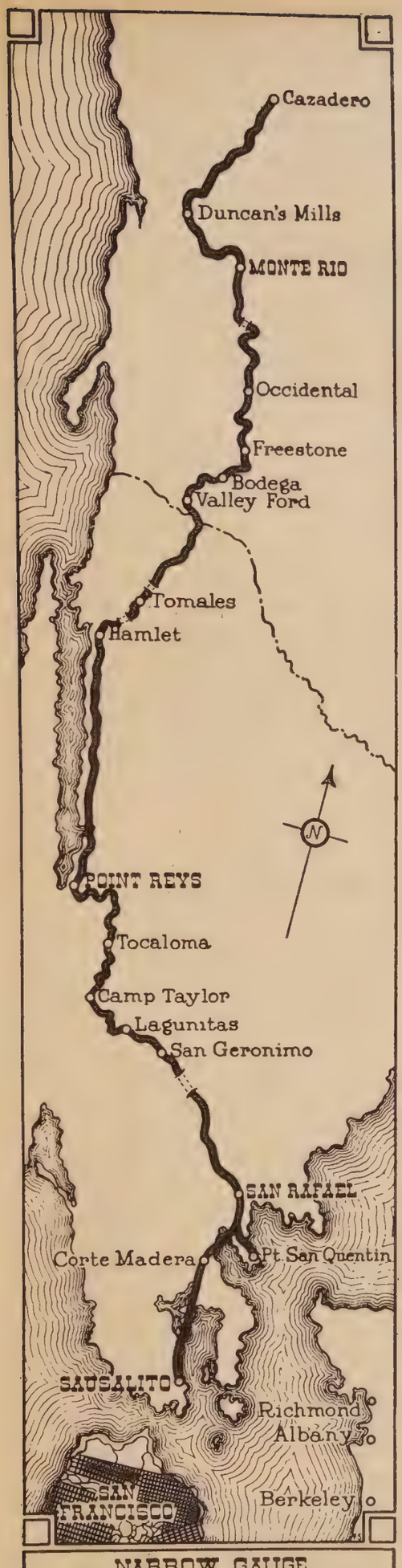
Number	Builder	Date	Model Number	Wheel Arrangement	Cylinders	Wheel Diameter	Weight	Horsepower	Tractive Effort
1902	GE	1942		B-B	16-5¾x8*	33	89,200	380	22,300
4610-4611	EMD-GM	1953	EMD8-567-B,SW-8	B-B	8-8½x10	40	211,500	800	52,875
4612-4617	EMD-GM	1953	EMD8-567-B,SW-8	B-B	8-8½x10	40	221,060	800	55,265
4620-4621	EMD-GM	1953	EMD8-567-B,SW-8	B-B	8-8½x10	40	221,060	800	55,265
4624-4625	EMD-GM	1954	EMD8-567-C,SW-9	B-B	8-8½x10	40	232,600	900	58,150
5279-5287	EMD-GM	1952-53	EMD16-567-B,SD-7	C-C	16-8½x10	40	329,900	1500	82,475
5290-5293	EMD-GM	1952-53	EMD16-567-B,SD-7	C-C	16-8½x10	40	359,100	1500	89,775
5309-5315	EMD-GM	1953	EMD16-567-B,SD-7	C-C	16-8½x10	40	328,680	1500	82,170
5316-5317†	EMD-GM	1953	EMD16-567-B,SD-7	C-C	16-8½x10	40	329,900	1500	82,475
5324†	EMD-GM	1953	EMD16-567-B,SD-7	C-C	16-8½x10	40	329,900	1500	82,475
5327-5328†	EMD-GM	1953	EMD16-567-B,SD-7	C-C	16-8½x10	40	329,900	1500	82,475

* Two D-17,000 Caterpillar engines, 8 cylinders each. † Equipped with steam boiler for passenger train hauling.
The color scheme of locomotives 5279-5310 conforms to the new SP standard—black with red striping, gray lettering, stainless steel color on front and back ends, with orange striping on front end. Nos. 4610-4625 and 5311-5328 still have the factory color scheme of orange and black.

ABBREVIATIONS

A&SE—Albion & Southeastern
AT&SF—Atchison, Topeka & Santa Fe
BF&GF—Bullfrog & Goldfield
CNW—California Northwestern
CP—Central Pacific
D&RG—Denver & Rio Grande (ng)
DL—Dollar Lumber Co. (ng)
DML&L—Duncan Mills Land & Lumber Co. (ng)
DSS&A—Duluth, South Shore & Atlantic (ng)
E&KR—Eureka & Klamath River
ER&E—Eel River & Eureka
FB&SE—Fort Bragg & Southeastern
GC&SF—Gulf Coast & Santa Fe
H&C—Hancock & Calumet (ng)
HB&T—Humboldt Bay & Trinidad
HL—Horseshoe Lumber Co.
JRL—Jordan River Lumber Co.
L—Leased
LV&T—Las Vegas & Tonopah
ng—narrow-gage
NM&SP—New Mexico & Southern Pacific
NPC—North Pacific Coast (ng)
NS—North Shore (ng)
NWP—Northwestern Pacific
NWR—Northwestern Redwood Co.
O&E—Oregon & Eureka
R—retired
R&LHS—Railway & Locomotive Historical Society
S—scrapped
SB—stationary boiler
SF&SJ—San Francisco & San Jose
SF&NP—San Francisco & Northern Pacific
SF&NW—San Francisco & Northwestern
SQ&SR—San Quentin & San Rafael (ng)
SP—Southern Pacific
SPC—South Pacific Coast (ng)
Un—unclassified

This roster was compiled from the most authentic material. I wish to thank the Motive Power Departments of the Southern Pacific in San Francisco and the Northwestern Pacific at Tiburon as well as historians Bill and Marshall Silverthorn, Roy Graves, Gerald M. Best, and others, for their assistance and cooperation. Any additional information to the above roster, with proof, of course, will be appreciated. Fred A. Stindt, 1414 Aberdeen Drive, San Mateo, Calif.



Left, 182, still in service on SP. Above, NWP's now-abandoned yard-wide lines.

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RECONDITIONED TYPEWRITERS, OFFICE machines $25.00 Up. Catalog Free. DixieGraph, King, N.C.

OLD COINS & MONEY WANTED

$40.00 CERTAIN LINCOLN Pennies. Indianheads $60.00. Others $5.00-$3,000.00. Catalogue 25c. Illustrated Catalogue 50c. Three Illustrated Complete Guarantee Buying-Selling Catalogues $1.00. Worthycoin Corporation (D-435), Boston 8, Massachusetts.

WE PURCHASE INDIANHEAD pennies. Complete allcoin catalogue 25c. Magnacoins, Box 61-DE, Whitestone 57, N.Y.

LAND BARGAINS

TEXAS HOMESITE $5.00 Down! Full price $89.50 on easy terms. Big 5000 square foot homesite at Bandera, Texas. Heart of "Dude Ranch Country". Electricity, telephone. 1300 feet above sea level. Warm days and cool summer nights make vacation paradise. Hunting, fishing, golfing, swimming, horseback riding. Write for Free photographs and details. Bandera Pass Ranch, Dept. 200A, Bandera, Texas.

INSTRUCTION

U.S. GOV'T JOBS! Men-Women, 18-55. Start high as $350.00 month. Qualify Now! 23,000 jobs open. Experience often unnecessary. Get Free 36-page book showing jobs, salaries, requirements, sample tests. Write: Franklin Institute, Dept. D36, Rochester, N.Y.

REAL ESTATE INSTRUCTION

BE A REAL Estate Broker. Study at home. Write for Free Book Today! GI Approved. Weaver School of Real Estate, 2018S Grand, Kansas City, Mo.

LETTERS RE-MAILED

BAMBOOZLER'S DELIGHT!! ALASKA postmarked letters flabbergast everybody! Airmail yours (6c stamped) to Bill Hill, Box 493, Anchorage, Alaska. Re-airmailed immediately! 25c each. Fun! (Baloney unlimited!!)

OF INTEREST TO MEN

"INTERESTING MAILS"—25c keeps your mail box full three months. Bentz (Desk K/97), Chatawa, Mississippi.

ADDITIONAL INCOME

GM71-HV DISCARDED INJECTOR Parts Wanted. Jack, 7120 Carnegie, Cleveland 3, Ohio.

MORE CLASSIFIED ON PAGE 57

ENGINE SMOKE

(Continued from page 22)

the speed was always slow, these were not serious. Indeed, both the Heisler and Shay people pointed out in their selling talks that their trucks and gears were especially designed to withstand the strain when the engines took to the ties.

Now and then runaways occurred when some luckless engineer "lost his air" while stopped on steep grade with a heavy load. If he moved fast before she got to rolling, he could pour the steam to her and move her uphill to a level spot where the wheels could be blocked and repairs made. But some of these machines had steam brakes. If a careless fireman let the pressure drop, the logger was in real trouble, both ways, for once a heavy logging train got out of control on a hill, there was no stopping it.

One fine summer's day a Climax was moving up a 7 per cent grade on the Clark & Wilson Lumber Company's line out of Scappoose, Oregon, when somehow the engineer lost both momentum and brakes. The consist of three gondola cars loaded with roadbed ballast promptly took over, and back downhill went the train. The engineer and fireman hit the brush as the runaway picked up speed. Rocking dangerously on the curves, the train made it down a long trestle with a sharply bending approach. Off into space went the three gondolas, never scratching a tie as they plunged into the canyon below. The Climax stuck to the tracks and made it across the trestle, but tried vainly to straighten out a curve at the far end. It left the rails and crashed into a car-mounted steel tower skidder spotted on a siding.

Runaways, however, seldom happened to geared engines. Derailments were common and were due chiefly to poorly laid track. All in all, the Shays, Climaxes, and Heislers performed wonderfully well the work they were made for. They are not responsible for the fact that the logging roads are fast disappearing. Trucks and hard-surface roads did them in.

Even the logging camps have about disappeared. The men live at home and drive to and from work. Loggers

Drawn from the only known photo of Shay

E. Shay had an idea for a new engine.

are thoroughly domesticated, and possibly happy about it all. Among them, however, there must be one here and there whose memory will conjure up a dawn when the sun came over the mountain to slant through the swirling mists, while the bullcook beat the living daylights out of the cookhouse gong and 200 young men came stomping down the camp walks, their caulks clicking, heading for an incredible breakfast, a box of Copenhagen, then a thundering ride behind the rocking Shay to where the spar tree reared high above the big round-stuff lying between the stumps. . . .

At least one authentic locomotive of those great days is slated for preservation. She's the Stimson Lumber Company's Shay built at Lima in 1909, and shipped around the Horn to Puget Sound where she worked for many years before transferring to a Stimson camp at Scoggin's Valley, Oregon. When in 1950 the company pulled up the last of its tracks, its stockholders voted to save the engine. Negotiations now pending indicate this venerable Shay will have a place in the permanent transportation museum planned as an adjunct to the new municipal zoo at Portland, Oregon. ●

LOGGING RAILROADS

This list was compiled from various sources, among them the American Forest Products Industries and the *Western Railroader*. It is incomplete and not wholly up-to-date. Some of the roads listed here are common carriers either owned by lumber companies or used by them for logging purposes.

UNITED STATES

Alabama

Swift-Hunter Lumber Co., Atmore.
W. T. Smith Lumber Co., Chapman.

Arizona

Saginaw & Manistee Lumber Co., Flagstaff. 35 miles
Southwest Lumber Mills, Inc., McNary, operating the Apache Railroad Co., 72 miles, out of McNary. This firm also believed to be operating a logging railroad out of Flagstaff.

Arkansas

Bradley Lumber Co. of Arkansas, Warren.
Crossett Co., Crossett.
Dirks Lumber Co., Mountain Pine.
Ozan Lumber Co., Prescott.
Poinsett Lumber & Manufacturing Co., Truman.

California

Arcata & Mad River Railroad, from Korbel to Korblex. Northwestern Pacific connection near Arcata. Owned by Northern Redwood Lumber Co. 7.5 miles.
California Door Co., Diamond Springs. 33 miles.
Clover Valley Lumber Co., Loyalton. 45 miles.
Collins Pine Co., Chester, operating the Almanor Railroad Co., a common carrier, Chester to connection with Western Pacific. 13 miles.
Diamond Match Co., Stirling City, Chico. 45 miles.
Dolbeer & Carson Lumber Co., Eureka. 15 miles.
Feather River Pine Mills, Inc., Feather Falls, common carrier line known as the Feather River Railroad. 18 miles.
Fruit Growers Supply Co., Westwood. 60 miles.
Hammond Lumber Co., Samoa. 31 miles.
Long-Bell Lumber Co., Weed. 60 miles.
McCloud River Railroad Co., common carrier operated by the McCloud River Lumber Co., McCloud, between Mt. Shasta on the Southern Pacific to Hambone on the Great Northern. 66 miles.
Michigan-California Lumber Co., Camino, common carrier between Camino and Placerville, known as the Camino, Placerville & Lake Tahoe Railroad. 9 miles.
Pacific Lumber Co. 25 miles.
Pickering Lumber Corp., Standard. 65 miles.
Quincy Lumber Co., Quincy, common carrier, Quincy to Quincy Junction, known as the Quincy Railroad Co. 6 miles.
Ralph L. Smith Lumber Co., Canby. 20 miles.
Santa Cruz Lumber Co., Santa Cruz. 6 miles.
West Side Lumber Co., Tuolumne. 68 miles.
Winton Lumber Co., Martell, operating the common carrier Amador Central Railroad Co. between Martell and Ione. 12 miles.

Florida

Alger-Sullivan Lumber Co., Century.
Brooks-Scanlon Lumber Mill, Foley, Perry.
Dantzler Lumber Co., Steddon Island.
Lee Cypress Lumber Co., Copeland.

Idaho

Hallack & Howard Lumber Co., Winchester, operating the common carrier Winchester & Craig Junction Railroad between those two points. 5.5 miles.

Potlatch Forests, Inc., Lewiston, operating the common carrier Washington, Idaho & Montana Railroad Co., from Palouse, Wash., through Potlatch into the Bovill area. 50 miles.

Louisiana

Bentley Lumber Co., Zimmerman.
Chicago Mill & Lumber Co., Tallulah.
Crowell & Spencer Lumber Co., Longleaf.
Davis Bros. Lumber Co., Ansley.
Fisher Hardware Co., Fisher.
H. D. Edwards, Oakdale.
Holly Ridge Lumber Co., Holly Ridge.
Louisiana Cypress Lumber Co., Ponchatoula.
May Bros., Garden City.
Turner Timber Co., LaMoven.

Mississippi

Crosby-Goodyear Lumber Co., Picayune.
Homochitto Lumber Co., Bude.
Crosby Lumber & Manufacturing Co., Crosby.
King Lumber Industries, Canton

Montana

Anaconda Copper Mining Co., Bonner. 16 miles.
J. Neils Lumber Co., Libby. 2 miles.

New Mexico

New Mexico Timber Co., Albuquerque. 10 miles.

Oregon

Big Creek & Telocaset Railroad Co., common carrier operated by the Collins Pondosa Lumber Co., Pondosa. 11 miles.
Brooks-Scanlon, Inc., Bend. 60 miles.
C. D. Johnson Lumber Co., Toledo, unit of Georgia Pacific, woods operations on the Valsetz River. 20 miles.
Coos Bay Lumber Co., Coos Bay, logging line to woods community. 60 miles.
Edward Hines Lumber Co., Burns, common carrier Oregon & Northwestern from Burns into the Seneca region. 51 miles. Logging road, Westfir. 10 miles.
Gilchrist Timber Co., Gilchrist, common carrier Klamath Northern Railroad Co.
Kinzua Pine Mills Inc., common carrier Condon, Kinzua & Southern Railroad between mill at Kinzua and Condon. 27 miles.
Long-Bell Lumber Co., Eugene. 1 mile.
Longview, Portland & Northern, two woods roads owned by Long-Bell Lumber Co. One runs from Gardiner to Reedport, 3.5 miles, the other from Grande Ronde to Willamina (SP connection), 8.76. Both lines were formerly known as Willamina & Grand Ronde Railroad.
Lorane Valley Lumber Co., Cottage Grove. 23 miles.
Medford Corp., Medford, a 40-mile line into the woods from mill at Medford. This operation uses, at least at times, a McGiffert loader, a huge railroad loading contraption that straddles the track and pulls the string of cars through as it loads them. Medco has a large pond in the woods. Ordinarily the firm truck-logs to the pond, then sorts them according to species and quality, and reloads onto the railroad for main haul to the sawmill. During bad weather, this firm loads directly onto rail cars in the woods; that is, it pushes spurs off the main line into timber stands, skids the logs to the rackide with tractors, and loads with the McGiffert. On such occasions it is a true railroad logging show, possibly the only one left in the West.
Oregon-American line, Veronia to Salmonberry, operated by the Verona division of Long-Bell Lumber Co. 30 miles
Oregon, Pacific & Eastern Railway, Disston to Cottage Grove, owned by Booth-Kelly Lumber Co., Springfield. Line serves the Mosby Creek reload of BK. Logging is by truck to Mosby Creek pond and reload, thence by rail to Cottage Grove (SP connection) and Springfield. 23 miles.
Mt. Hood Railway, Hood River south to Dee and into the woods. Once owned by Oregon Lumber Co., Edward Hines Lumber Co. recently bought this firm, but the railroad stays in the ownership of the Oregon Lumber Co. families—the Lighthall and Eccles families of Salt Lake City. A common carrier. 22 miles.
Shevlin-Hixson Co., Bend. 65 miles.
Stimson Lumber Co., Forest Grove. 14 miles.
Valley & Siletz Railroad, Valsetz to SP at Independence, owned by Valsetz Lumber Co., Valsetz. 41 miles.
Weyerhaeuser Timber Co., Springfield branch, Sutherlin to Roach Unit of Calapooya Tree Farm. Line runs from reload in woods to SP at Sutherlin. Klamath Falls branch.

New styles in Christmas cards
YOUR FRIENDS WILL BUY ON SIGHT
You can make over $1.00 on a box

— And We'll Send You 26 of the Top Favorites to Show, Absolutely FREE!

ALL DIFFERENT—NO TWO CARDS ALIKE

Everybody—friends and neighbors—even strangers—"fall in love" with these new, EXCLUSIVE Christmas Card designs. And no wonder! They're different! They're brand new! They include the finest Religious, Humorous, Artistic, and Business Christmas Cards—Printed, Embossed, and Die-Cut, as well as the sensational, new "Super-Slims." **And even with sender's name printed on every one,** these new kinds of cards sell for just about 3c each! No wonder you can make good money in spare time just showing them!

Make More than $60.00 on only 50 Orders!

With these 26 FREE cards, we'll send you everything you need to make lots of quick cash for yourself, your church or your club. And we'll show you how you can make this extra money every week between now and Christmas! The 26 cards you get are in full color—all the newest and most popular designs ever created—and they are **Exclusive!**

SEND NO MONEY—JUST MAIL COUPON
and Get Everything Needed to Begin

There is no charge for these Sample Kits. All you do is mail us the coupon with your name and address. When the cards arrive, show them to friends and neighbors. If, in 10 days, you aren't delighted with the money you have made, and the orders you've received—if you still aren't completely convinced that this is a wonderful spare-time money-maker for you—just return the Sample Kits and forget the matter. Mail coupon today to

GENERAL CARD COMPANY, Dept. 649
1300 West Jackson Boulevard, Chicago 7, Illinois

SEND NO MONEY—MAIL THIS COUPON

GENERAL CARD CO., Dept. 649,
1300 W. Jackson Blvd., Chicago 7, Ill.

Please send me the 26 EXCLUSIVE Christmas Cards —FREE, with New Color Catalog of Stationery, Gift Wraps and Gifts, and complete instructions for making lots of money by taking orders in full or spare time. It is understood that I pay nothing for these 26 cards now or ever. If after 10 days, I am not delighted with the orders I've gotten and the money I'm making, I'll send your Sample Kits back and forget the matter.

*My Name*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

South Carolina

Argent Lumber Co., Hardeeville.
Holly Hill Lumber Co., Holly Hills.
Santee River Hardwood Co., St. Stephens.

Texas

Carter Lumber Co., Camden.
Frost Lumber Industries, Nacogdoches.
Kirby Lumber Co., Silsbee.
Kurth Lumber Co., Jasper.
Temple Lumber Co., Pineland.

Virginia

Gray Lumber Co., Waverly.

Washington

Biles-Coleman Lumber Co., Omak. 29 miles.
Cascade Lumber Co., Yakima. 8 miles.
Columbia & Cowlitz Railroad, 3.5 miles, Longview to Rocky Point, owned by Weyerhaeuser Timber Co. A common carrier, this line connects with the Northern Pacific, Union Pacific, and Great Northern main lines at Rocky Point. It starts at the Weyerhaeuser Timber manufacturing center in Longview and runs up into St. Helen's Tree Farm, but only the first 3.5 miles is common carrier. Most of the Longview branch's logs come out over the line.
Crown Zellerbach Corp., line into woods on Elokowin River, Washington side of Columbia near Cathlamet. 50 miles.
Deep River Timber Co., Deep River. 8 miles.
Harbor Plywood Corp., National. 5 miles.
J. Neils Lumber Co., Klickitat. 52 miles.
Kosmos Timber Co., Kosmos. 75 miles.
Long-Bell Lumber Co., Longview. 40 miles.
M. B. Logging Co., Markham. 11 miles.
Mullenix Bros., Doty. 5 miles.
Ozette Timber Co., Beaver. 30 miles.
Puget Sound Pulp & Timber Co., Clear Lake. 30 miles.
Rayonier, Inc., New London to Quinault Rayonier, Inc., mill is at Hoquiam. Line reaches tidewater at New London. 40 miles.
St. Regis Paper Co., Mineral. 23 miles.
Sauk River Lumber Co., Darrington. 24 miles.
Schafer Bros. Lumber Co., Aberdeen, from Montesano north into Olympic peninsula timber. 35 miles.
Simpson Logging Co., Shelton to Grisdale. 45 miles.
Soundview Pulp Co., Everett. 6 miles.
Weyerhaeuser Timber Co., Vail to tidewater near Olympia. Logging road, Longview. 170 miles.
White River Lumber Co., Enumclaw. 100 miles.

West Virginia

Cherry River Boom & Lumber Co., Richwood.
Ely Thomas Lumber Co., Fenwick.
Meadow River Lumber Co., Rainelle.
Middle Fork Railroad, Ellamore. 13 miles.

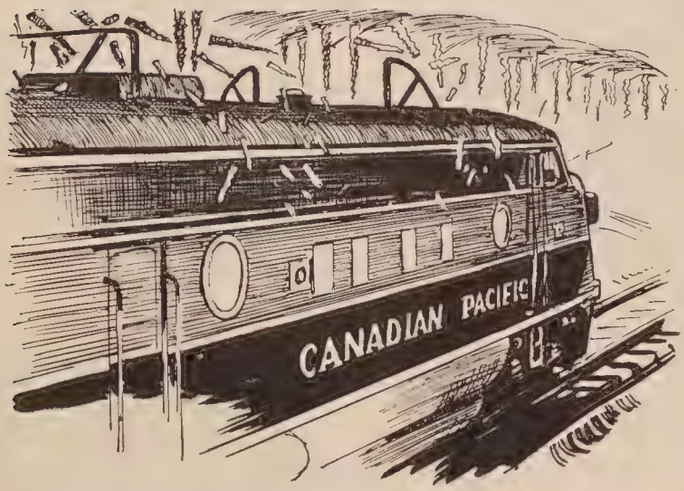
CANADA

British Columbia

Alberni Pacific Lumber Co., Port Alberni. 75 miles.
Bloedel, Stewart & Welch, Ltd., Bloedel. 50 miles. Port Alberni. 65 miles.
British Coumbia Forest Products, Ltd., Youbou. 30 miles.
Canadian Forest Products, Ltd., Vancouver. 50 miles.
Comox Logging & Railway Co., Headquarters. 150 miles. Ladysmith. 50 miles.
Hillcrest Lumber Co., Ltd., Mesachie Lake. 10 miles.
O'Brien Logging Co., Ltd., Stillwater. 3 miles.
Powell River Co., Ltd., Powell River. 15 miles.
Salmon River Logging Co., Ltd., Kelsey Bay. 37 miles.
Victoria Lumber Co., Ltd., Chemainus. 58 miles.

Along the Iron Pike

by Joe Easley



ICE-BREAKERS. CANADIAN PACIFIC FITS SOME OF ITS DIESELS WITH BARS TO SMASH ICICLES IN TUNNELS.

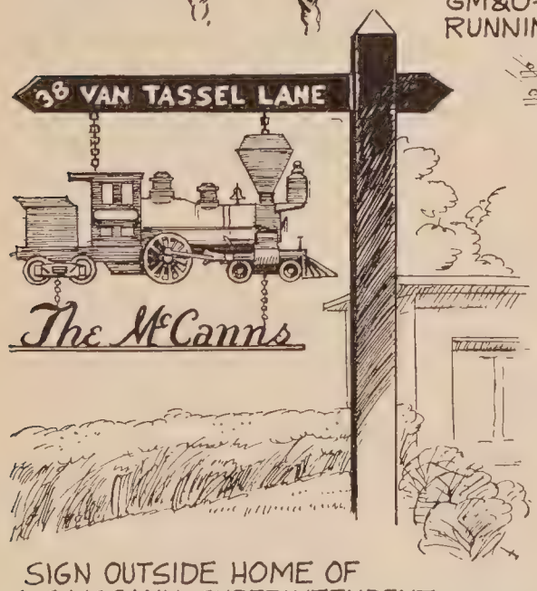
WORLD'S NORTHERNMOST RAILROAD IS AN IRON-ORE LINE ON THE ISLAND OF SPITZBERGEN IN THE ARCTIC OCEAN NORTH OF NORWAY.

Pocahontas

Ann Rutledge

Nellie Bly

ONLY THREE AMERICAN WOMEN, SO FAR AS WE KNOW, HAVE HAD PASSENGER TRAINS NAMED FOR THEM. N&W *POCAHONTAS* AND GM&O-ALTON *ANN RUTLEDGE* ARE STILL RUNNING. PENNSY'S *NELLIE BLY* IS NOT.



SIGN OUTSIDE HOME OF A. S. McCANN, SUPERINTENDENT, WESTERN DIVISION, SOUTHERN PACIFIC. IS REPLICA OF PIONEER LOCOMOTIVE *COLLIS P. HUNTINGTON.* (*from Bill Knapke*)

DOG NAMED PENNY REARED ON HER HIND LEGS AND PUSHED 2½-YEAR-OLD DENNY LOBAUGH FROM PATH OF SPEEDING ROCK ISLAND *ROCKET* AT NEVADA, IOWA. THEN JUMPED CLEAR HERSELF.

A CARLOAD OF MULES

A True Tale by

William H. Overley

ONE HOT AUGUST DAY, when I was dispatching Chesapeake & Ohio trains on the Big Sandy Division, I sat across the glass-partitioned table from George J. Derbyshire. I could see that George was in trouble. The division under his thumb was the Lexington, single-tracked and bristling with problems.

Came a lull on the Big Sandy. I leaned back in my chair to catch my breath, at the same time automatically reading the chatter from the telegraph instrument on the other side of the table. All was telegraph in those days. The operator at Winchester, Kentucky, a hundred miles down the line, tapped out these words: "First 92 is here, dispatcher. Pop Berry says tell you he's got a carload of mules next his caboose and they've kicked four slats out of the side of the car. What shall he do?"

Now, a helpless conductor, one who is eternally stopping a busy train dispatcher to ask about some minor detail, gets in your hair. I watched through the glass partition.

"Tell him," said George, after swallowing hard, "to borrow a hatchet and nails from the agent, nail the slats back, and bring the car forward."

More than an hour later another lull came in my work. This time I heard the operator at Midland, a coaling station, reporting to Derbyshire.

"Pop Berry on First 92 is here. He says tell you those mules are kicking worse than ever. Four more slats are kicked out and one mule has his leg caught in a crack. What shall he do?"

"Tell him," the dispatcher said tensely, "to bring that carload of jackasses to Ashland if it takes him all day and all night. We want to make conductors out of them."

The next day George was called into the superintendent's office. Pop Berry was there with the dignified, white-haired superintendent, John A. Fox.

"Mr. Derbyshire," the latter began, "Conductor Berry is here with a serious complaint. He tells me that yesterday while he was on First 92 at Midland, doing his best to get his train over the road with a carload of refractory animals next to his caboose, you, in effect, called him a jackass. Conductor Berry feels humiliated. He feels that an apology is due. I agree."

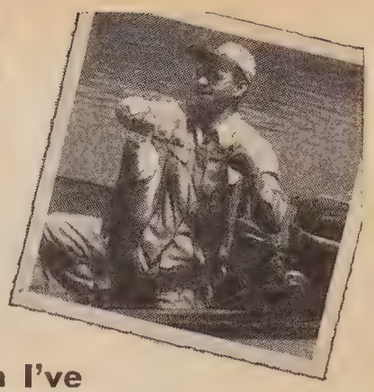
The dispatcher looked hard at his old super, caught the faintest of twinkles, and came through like a good sport.

Five minutes later, after cordial handshakes and mutual assurances of goodwill, Pop Berry marched out of the office with the air of a conquering hero. The minute the door was closed, two tactful division officials, convulsed with laughter, bent double over a flat-topped desk. But Pop didn't know that.

It happened many long years ago. Later, Pop Berry became captain on the varnished cars making daily trips across Kentucky between Ashland and Louisville. And the last I heard of George Derbyshire, he was superintendent of the Chicago Division.

I wonder where those two men are today, and if they remember the carload of mules. ●

Bass Fishermen will Say I'm Crazy . . . *until they try my method!*



But, after an honest trial, if you're at all like the other men to whom I've told my strange plan, you'll guard it with your last breath.

Don't jump at conclusions. I'm not a manufacturer of any fancy new lure. I have no rods or lines to sell. I'm a professional man and make a good living in my profession. But my all-absorbing hobby is fishing. And, quite by accident. I've discovered how to go to waters that everyone else says are fished out and come in with a limit catch of the biggest bass that you ever saw. The savage old bass that got so big, because they were "wise" to every ordinary way of fishing.

This METHOD is NOT spinning, trolling, casting, fly fishing, trot line fishing, set line fishing, hand line fishing, live bait fishing, jugging, netting, trapping, seining, and does not even faintly resemble any of these standard methods of fishing. No live bait or prepared bait is used. You can carry all of the equipment you need in one hand.

The whole method can be learned in twenty minutes —twenty minutes of fascinating reading. All the extra equipment you need, you can buy locally at a cost of less than a dollar. Yet with it, you can come in after an hour or two of the greatest excitement of your life, with a stringer full. Not one or two miserable 12 or 14 inch over-sized keepers — but five or six real beauties with real poundage behind them. The kind that don't need a word of explanation of the professional skill of the man who caught them. Absolutely legal, too—in every state.

This amazing method was developed by a little group of professional fishermen. Though they are public guides, they rarely divulge their method to their patrons. They use it only when fishing for their own tables. It is probable that no man on your waters has ever **seen it, ever heard of it,** or ever **used it.** And when you have given it the first trial, you will be as closed-mouthed as a man who has suddenly discovered a gold mine. Because with this method you can fish within a hundred feet of the best fishermen in the county and pull in ferocious big ones while they come home empty handed. No special skill is required. The method is just as deadly in the hands of a novice as in the hands of an old timer. My method will be disclosed only to a few men in each area—men who will give me their word of honor not to give the method to anyone else.

Send me your name. Let me tell you how you can try out this deadly method of bringing in big bass from your "fished out" waters. Let me tell you why I let you try out my unusual method without risking a penny of your money on instructions or lures. There is no charge for this information, now or at any other time. Just your name is all I need. But I guarantee that the information I send you will make you a complete skeptic—until once you try it! And then, your own catches will fill you with disbelief. Send your name, today. This will be fun.

ERIK T. FARE, Libertyville 15, Ill.

Erik T. Fare, Libertyville 15, Illinois

Dear Mr. Fare: Send me complete information without any charge and without the slightest obligation. Tell me how I can learn your method of catching big bass from "fished out" waters, even when the old timers are reporting "No Luck."

Name_____

Address_____

City _____ Zone____ State_____

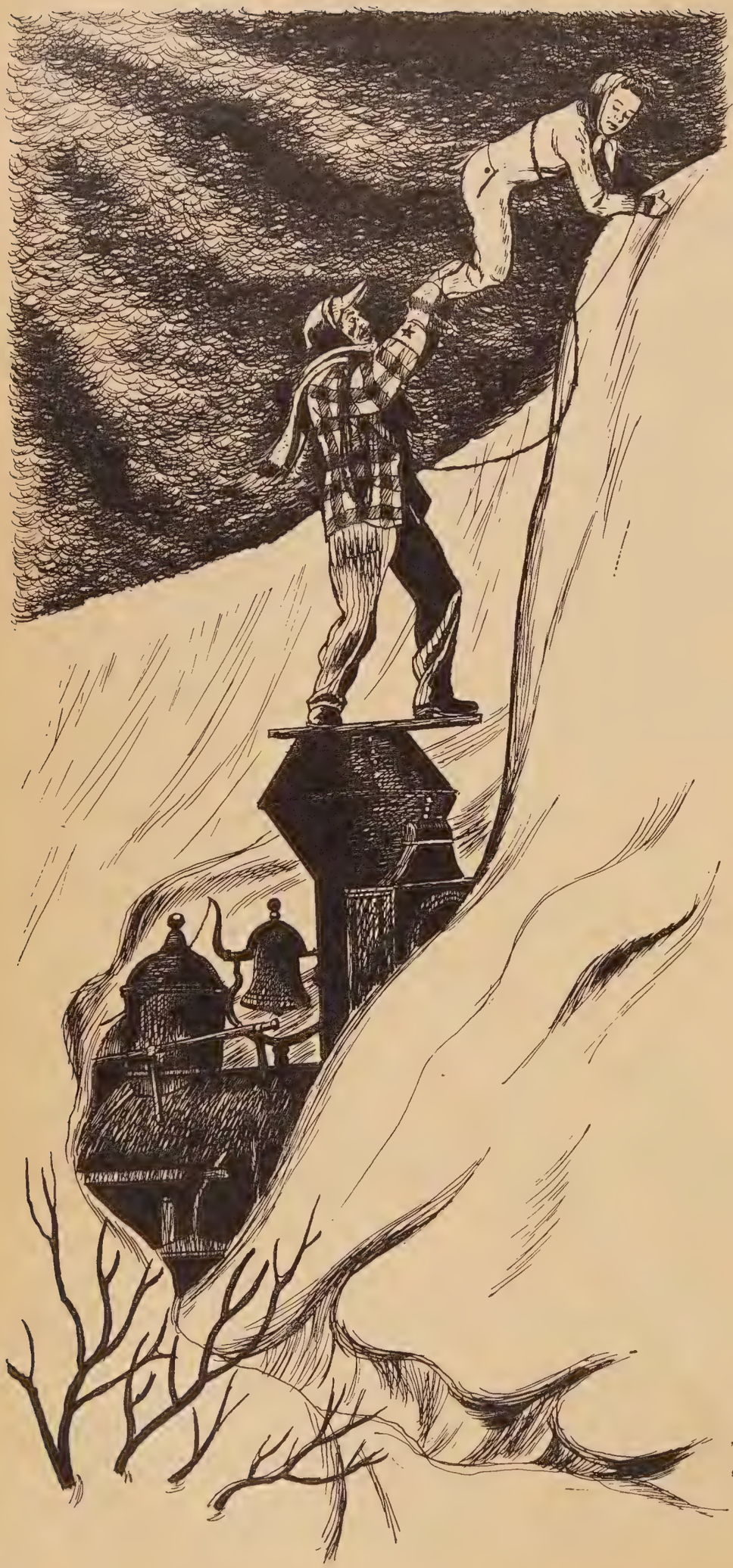
Waybill for Next Issue (October, out Aug. 4)

WATER TOWERS AND TRACK PANS: 125 years of locomotive water service, by Harold Cook, well illustrated, including front cover

COW-COUNTRY NARROW-GAGE: a history of the old Nevada-California-Oregon line by O. K. Burrell, with photos, map, and loco roster

WRECKING CREW: A. E. Allen takes you "back stage" on the Northern Pacific

PLUS true tales, an electric lines feature article, a fiction story by railroader Jack McLarn, short hauls, nation-wide list of railfan clubs, your favorite departments, an all-time loco roster of the Fort Worth & Denver, and plenty of choice pix



Five Days On a Snowbound Train

One of the Passengers Recalls the Harrowing Events of Fifty Years Ago

A TRUE TALE

by MRS. GLADYS PORTER

IT WAS still five days until Christmas, but as far as I was concerned it might as well have come already. My father had taken me into a tailor shop in Tahoe, California, to buy me a new suit of clothes. I had just tried it on and the Chinese tailor was busy trying to impress my father with what a bargain he was getting, but my father was in no mood to be appreciative. We had to catch a train in a few minutes, and he wanted to pay for the suit and get moving. But every time he'd try, the tailor would grin and point out some new and unsuspected virtue in my new suit.

Just then the wind rushed down out of the mountains like thunder, the sky turned black, and it be-

The conductor stood on the smokestack and boosted me up over the drift.

ILLUSTRATION BY JON NIELSON

gan to snow—so heavily you couldn't see the railroad station across the street. My father flung the money down on the counter, scooped me up in his arms, and dashed outside before I even got a chance to say goodbye. I never had another chance, for the little tailor lost his life in the storm.

My father was on the road for the Southern Pacific Fruit Exchange, and I traveled around with him. That was why I dressed like a boy. I was about seven or eight, so nobody ever noticed the difference. That day in Tahoe, more than fifty years ago, we were going to take the Lake Tahoe Railway & Transportation Company train to Truckee where we could get the Southern Pacific home.

When we got to the station, the old woodburner was waiting, its engine throbbing impatiently and its stack sending up great clouds of smoke and sparks, which the wind caught and hurled showering about us. My father hurried me into the smoking car, and we sat down.

But the train didn't move. There were a dozen or more other passengers in the car, drummers mostly, with their large heavy suitcases and fat cigars, most of whom had already settled down to a game of poker.

"What in blazes're we waitin' for," one of them muttered irritably.

"A full house," someone else said, and the rest of them guffawed appreciatively.

Outside it was dark as night, though here and there you could make out a lantern at the station. The blizzard seemed to have got even worse. The wind howled outside the windows, and the old coach shuddered and rocked slightly from side to side.

After a while the conductor came in and told us that the train crew couldn't decide whether to go on or not. As for him, he was all for waiting in Tahoe until the blizzard passed. These mountain storms usually didn't last long. But it was up to us. Everyone wanted to move on. If we were going to get snowed in, the drummers said, they'd much rather get snowed in in Truckee than in Tahoe.

"It's your funeral," the conductor said snappishly, and went back to give the hogger the word to move on.

But when after ten minutes or so we still hadn't pulled out, one of the drummers went back to see what was the trouble. The trouble was the hogger. He thought we were crazy. He was going to get moving all right, but he wanted to be sure everyone understood he was doing it under protest.

Finally the train began to move. The lights at the station disappeared into the darkness, and we settled back for the trip. It was a rough one, and every now and then the wind would shake the coach, and I would watch the lanterns swaying back and forth from the ceiling. It wasn't any too warm either. The wind came in from everywhere, and so most of us sat around the big black wood-burning stove in the middle of the car and took turns chucking wood into it, and spitting against it and listening to it sizzle.

We hadn't been under way long when the conductor came back and told us the engine was eating up wood like nobody's business and even though they'd taken on an extra supply at Tahoe he wasn't sure we'd make it to the next woodpile. But there was nothing to worry about. The empty coach behind us had been filled with a supply, as an extra precaution. The problem was how to get it from the coach to the tender. He figured we'd have to pitch in and lug it through the swaying cars. The salesmen didn't like the idea much, but they didn't have much choice, so they started to draw lots to see who'd take on the job. They never got a chance to find out though.

Just then we all went sailing across the car. The lanterns bounced and rocketed all over the ceiling, and the train came to a stop. Fortunately the tables, stove, and seats were bolted down. Nobody was seriously hurt, but there were plenty of bumped heads and knees and elbows. The conductor went on ahead to find out what had happened, while the salesmen began worrying about not getting into Truckee on schedule. They had a lot of irons in the fire.

The conductor came back with the engineer and fireman and told us we were there to stay for a while. The engine was buried in a huge snow pile up around the next bend, and

MEN PAST 40

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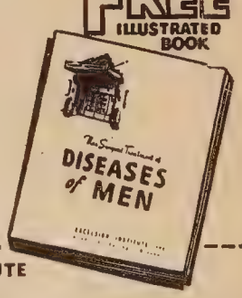

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we'd just have to wait for the plow. There was no way to get her out. They'd already tried. They'd drained the water out of the boiler, loaded themselves down with torpedoes and fusees, and were heading for the rear of the train to set them out. But they needed our help. If you got lost in such a storm, there wasn't much of a chance you'd ever get found.

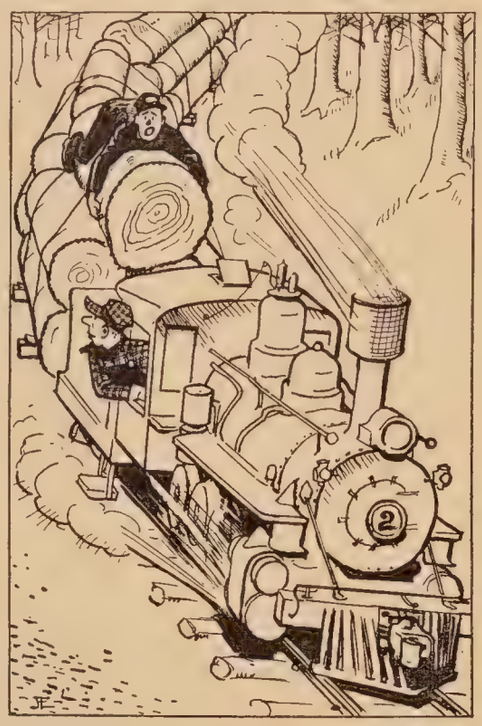
One or two of the drummers objected that this wasn't included in the price of their tickets, besides which they didn't have any hankering to get lost themselves, but the rest of us bundled into everything we had, tied together all the rope we could find, and went outside.

I've never seen such wind and snow. You could hardly see a dozen yards ahead, and the conductor's lantern looked blue in the wind. The conductor needed us to hold the rope and keep it clear and to pull him back if he stumbled into something in the dark. For our own safety, he told us, he had to put the torpedoes as far back as he could.

The conductor set off, with one end of the rope tied around him and the other to the coach. I was at the end nearest the coach, while the others spaced themselves out at intervals along the rope as the conductor moved back along the track. It wasn't so cold, but the wind was like something solid pushing against you. You could hardly breathe. It tugged against your clothes and bit into your face. You could hardly stand up. Finally we lay on our stomachs on top of the rope and waited for the conductor to come back. Finally I saw his lantern again up ahead, and the men bunching together along the rope as he made his way slowly back to the train.

When we got back inside the smoke-filled car again, everyone was excited and happy. They were laughing and joking and warming their backsides at the stove. It was something of an adventure. The snowplow would come through as soon as the blizzard stopped, and we'd be in Truckee in no time. All we had to do was wait—keep the stove full of wood and now and then to shovel off the roof so the snow wouldn't get too heavy.

The crowd of us were quite comfortable in that smoker. There were fifteen of us, with seats enough for sixteen. The lanterns above the four tables gave plenty of light, and the stove threw out plenty of heat. As soon as they'd warmed up, the drummers settled down again at the tables and began to play poker. The fireman—in later years he became a university president—pulled out an arithmetic book and, like Abe Lincoln, worked out problems on the tabletop or floor with the blackened end of a stick. He was just a lad, probably not more than sixteen or so. The conductor played solitaire for a while and then took off his boots and oiled them with something that smelled so terrible that a couple of the traveling salesmen bowed out of the game and retreated to the other end of the car and sat chewing their nails.



"Hey, Boomer, did I forget to tell you these cars have no air?"

I sat in a chair across from my father and watched. The lanterns burning brightly in the smoky air hung perfectly still, but every once in a while they would begin to tremble mysteriously, and sway a little from side to side. My father said that drafts made them move, even if I couldn't feel them myself. That was the last thing I remember before I finally fell asleep.

THREE DAYS LATER we were still there in the train. The snow hadn't stopped, the plow hadn't come, and we were getting tired of being cooped up. At first, being snowbound had seemed something of an adventure. Now we were beginning to get worried. The snow had let up somewhat the night before, and the wind had gone down, but on the third morning the snow still hadn't stopped. The drifts had risen up over the windows and then over the roof. This made the car easier to heat, but even so our wood was beginning to run low, and our food was already nearly gone.

We didn't have any idea how long it would be before the plow could get to us. We could hang on for some time without food, but without wood we'd freeze over night. Everybody agreed it was high time we did something. But nobody knew what. There was a woodpile somewhere up ahead, but a man couldn't cross those drifts to get to it. They just wouldn't hold up his weight.

Then I heard my father saying, "Why not send Gladys to find out where it is—then we can tunnel to it."

They told him they couldn't send out a little girl—they just couldn't do it.

But my father said, "We'll tie a rope around her, boost her up on the crust, and let her wander. If she slips into a gully, she's so light we can always pull her in. A heavy man would be lost."

"Well," one of the drummers said, "if we don't let her go, we'll all freeze to death anyway."

That seemed to clinch the argument. I put the conductor's red flannel on over my clothes, while they told me what they wanted me to do. I don't think I was at all scared. Not just then anyway. I was too excited at the thought of going off by myself and saving the lives of all the men on the train.

My father checked to see I was bundled up properly, then fastened a rope around my chest, and attached a guide string to my wrist. When I wanted to go ahead, I was to give two long pulls on the string. If I got five short pulls in reply, it was all right for me to go ahead; if I didn't, I was sup-

posed to come back. The conductor, who was the tallest man there, stood on the smokestack and boosted me up over the drift.

"Cut around two bends," my father called to me, "and if you don't find the wood, you come back. You hear me, Gladys?"

"I hear you, Daddy," I told him.

My father looked worried, and I waved at him, and then started over the snow. Everything was gray—gray drifts and gray sky and here and there a gray treetop or wind-blown hill, and nothing moving except the snow. The wind had gone down and the flakes floated about me. I looked back toward where I'd come from and could see nothing except the trailing rope which bound me to the train. I was alone.

Around the first bend, I found nothing. And around the second—still nothing. By now I had just about reached the end of the rope. But up ahead at the foot of a long slope I saw an irregular mound of snow. I was sure this must be the woodpile. I pulled twice on the guide string and waited for permission to go on, but the five pulls didn't come.

I wanted to go on, so I jerked the string from the hands of the conductor, unfastened the rope, and tied the string to the end of it. This doubled the length of my connection with the train. Tucking my head between my knees and wrapping my arms about me, I rolled down the long slope to a lower level.

When I came to a stop, nothing looked the same as it had from above. It was beginning to get dark, and the mound was still quite a distance away from me. I went on toward it until I again reached the end of my string. But I knew I couldn't turn back now. Not when I was so close. So I broke a branch off the top of a nearby tree, removed the string from my wrist, tied it to the branch, and stuck it in the snow so I could find my way back to the train.

When I got near the mound of snow, I could see dark patches poking through, and I knew I had found the pile at last. The dark patches were the logs.

I ran back toward the string. The wind had started to come up again, and the snow stung my face bitterly. Suddenly I didn't know where I was. I couldn't find the branch with the string anywhere, and I began to wander about aimlessly looking for it. I was sick with fright. I knew now what a foolish thing I had done. Nobody would ever be able to find me now. Then, fortunately, I stumbled upon the branch. I was weak with relief.

The wind had come up again, and I had trouble standing. I dropped to my stomach and started to crawl along toward the train. The slope I had rolled down so easily before was steep, and I kept slipping back, but I refused to give up. Suddenly the string came away in my hands. I was lost. I couldn't see anything I recognized anywhere, and by now the snow had already filled in what tracks I had made coming down. I didn't bother to move. I lay still crying futilely to myself and calling for my daddy.

Just then I felt something touch my shoulder, and I looked around. I thought I was seeing things. The fireman was kneeling beside me.

"Gladys," he said. "Gladys, it's all right," and I threw my arms around him, and said, "I found it." I said, "It's down at the foot of the slope.

When he'd rested a moment and saw that I was all right, he put his arm around me, and we started on down toward the woodpile. He carried a tray with him the conductor had found in the coach to use as a sled in case the snow wouldn't support his weight.

"We'd better hurry," he said. "It's getting dark, and the snow and wind are getting worse."

Only now we couldn't find the woodpile, and we stumbled around through the snow in the twilight looking for it. Suddenly the snow gave way under the fireman, and he was buried in it up to his neck. I grabbed hold of him, but the snow began to give way under me, and he hollered, "Get back. You'll fall in yourself," and I moved away from him, while he started to work his way out with the tray. I felt weak and tired and hungry, and I dropped in my tracks and waited for him.

He was scared half out of his head, but he kept saying, "It'll only take a couple more minutes, Gladys. I'll be out in no time. You just sit there."

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Somehow he managed to get out, but now I was too tired to walk another step.

"You got to," he said. "I can't carry you. The snow wouldn't hold us. I'd carry you if I could, Gladys, but we'd be too heavy." I wanted to do it so badly that somehow I managed to do it. Once I was moving it didn't seem so bad.

It was so dark now we couldn't see much of anything, and then a big gray shadow emerged from the darkness.

"That's it," I said. "That's it, I know it is."

"No," he said. "It's just a big drift. Just a great big snow drift."

We started to climb up the side of it just to be sure, when suddenly the fireman lost his footing again, and we both went under.

He let out a yell. "Gladys, I found it. It's here. Under the snow."

His feet had struck something hard, and now he was standing at last on the woodpile we'd been hunting so long. In the shelter of the drift that covered the pile, the wind had left a fairly clear space of hardened snow. We managed to pull out some of the logs nearest the track. The fireman laid down a sort of floor with the dried wood and then burrowed into the drift with his tray to make a sort of cave to protect us from the wind. Then he made a fire.

By the time it was blazing cheerily we felt a lot better. It was dark now, and we knew it was useless to try to go back to the train that night, so we huddled together around the fire and finally fell asleep.

WE WERE AWAKENED the next morning by shouts and yells, and then we saw the rest of the gang come sliding down the slope where the fireman had found me the night before. During the night the snow had stopped, and a thick icy crust had formed over everything. The sky was still gray though, and it looked as if we were in for even more snow.

The drummers brought the stove from the train with them. They figured it would be easier to carry the stove to the wood than to carry the wood to the stove. There were only thirteen of us now. One of the men had died of exposure and lack of nourishment the night before, and the old conductor had refused to leave the coach and go out in all that cold and snow. If he didn't freeze, he'd probably starve. We were grim when we realized how close we were to starvation ourselves.

The men enlarged our clearing in the snow and set up the stove and built a fire. After making bets on how large the woodpile was and on whether or not we would be found alive, the drummers settled down to their poker game again. The last of the food had been saved for me, but the salesmen accused Dad of holding out more than my share. They bickered about it for a while, and I thought there was going to be a fight, but by that time I'd eaten what little was left, and I guess they didn't see much point any longer in fighting about it.

That evening we bet on how close to midnight the last hand of cards would be finished. Dad and I were less than a minute off. Shortly after that the card-playing ended, and we celebrated our Christmas Eve. I don't think I've ever seen a more dreary one.

Dad pulled out his Bible and, with the darkness of the world circling around us, read us the story of the first Christmas. Then each of us in turn offered a short prayer, and when we had finished, someone noticed that the sky was clear, that the stars shone bright and clear in the cold night sky.

Christmas morning we were awakened by the sun. The whole world was ablaze with ice, and the flash and glitter of it made your eyes ache. Treetops, snowdrifts, the sky itself were dazzling. Light snow curled smokily across the icy drifts, and a cool wind was blowing, but the sun was warm.

In honor of Christmas we exchanged a few trinkets and returned all the money we had won from each other. But we didn't succeed in being very cheerful. We hadn't had anything to eat in a couple of days, and the only thing we had to put in our stomachs was a little warm whiskey and water.

As the day wore on, we began to develop headaches from the blinding glare of the sun, and I felt sick from not having had enough to eat. Nobody did anything now, but keep the fire going. The drummers even gave up their poker games. We couldn't understand why nobody had tried to get through to us, when the storm had been over for nearly a day. The train crew kept trying to explain how it was long hard work trying to plow through those drifts. The train would get to us soon as possible, but it might take quite a while.

Late that afternoon the engineer called Dad and me over to the track. There was a train coming, he said, he could hear it in the rail. He put a handkerchief down on the steel, so we could listen for ourselves. We heard it too. Dad and I were too weak to get up, but the engineer carried me back to the stove while Dad followed on his hands and knees. We decided not to tell the drummers about it. We weren't sure how far away the relief train still was or what drifts it still had to buck to get to us. Knowing it was coming only made things worse, and we weren't sure what the drummers would do if they knew—something foolish maybe, like trying to reach it on foot.

As the engine hit the first torpedo our hoghead had laid, the drummers stirred. Those who were too weak to get to their feet crawled to the track on their hands and knees. But Dad and I were too tired and hungry to care. We lay back in the drift by the fire and watched them hurry toward help.

I never did know how we got back to the train, but there we were, all of us, with the smell of real food in our nostrils for the first time in days. The old conductor who'd been left in the coach was all right. He'd been living off the fat of the land. He'd discovered some stale sandwiches in one of the cars, and he'd chopped up most of the coach and was about to start on the sleeping car for fuel. The dead man was laid out on the floor waiting to be buried.

Dad and I rode to Truckee in the engine cab, watching the plow toss aside the snow that had held us prisoner for five days. It looked beautiful flying back on either side of the engine like sea foam, but I didn't really notice. I was too busy thinking how good it'd be to get to Truckee. ●

TRANSIT TOPICS

by STEVE MAGUIRE

Steve Maguire

METROPOLITAN Coach Lines president Jesse Haugh, readers tell us, is getting really worried now that MCL's two-year lease on Pacific Electric tracks is running out. Mr. Haugh never anticipated he'd have any trouble getting rid of the former PE passenger service which MCL now operates over the leased PE trackage. Now, at the prospect of having to pay for use of the lines, Mr. Haugh is doing his best to get out—but fast. So far, with little success.

Says Mr. Haugh, "We have a definite and progressive plan to provide the citizens of Los Angeles with the finest rapid-transit system in the nation, and the reactionary City Board of Public Utilities and Transportation stands in the way. . . . Our buses operating on the freeways can average 55 miles an hour . . . the express subways in New York average only 28 miles an hour. Surely this is definite proof of the superiority of rubber-tired . . . over rail transit."

Reader Ken Harrison of Los Angeles comments that since 55 miles an hour is the freeway speed limit, Jesse Haugh must plan to start up his buses at 55 miles an hour, make no stops for passengers, and never leave the freeways to enter the business areas of the city. And that isn't all—the freeways are not expected to be completed for at least another fifteen years, so where does he expect to operate his 55-mile-an-hour buses? Certainly not on any of the routes now served by the electric cars.

Incidentally, Richard Willis, 232 S. Mariposa Ave., Los Angeles, tells us that the Glendale-Burbank line, currently still in operation, is one of the few on which trolleys were called back in service after bus substitution had taken place. So much opposition developed after a change to buses in the late Thirties, as the result of slow schedules and overcrowded vehicles, that rail service was resumed after a few unhappy months of bus operation.

J. G. Brill Co.

This pint-sized, horse-drawn inspection car was built by ACF-Brill, apparently for export, between 1869 and 1882.

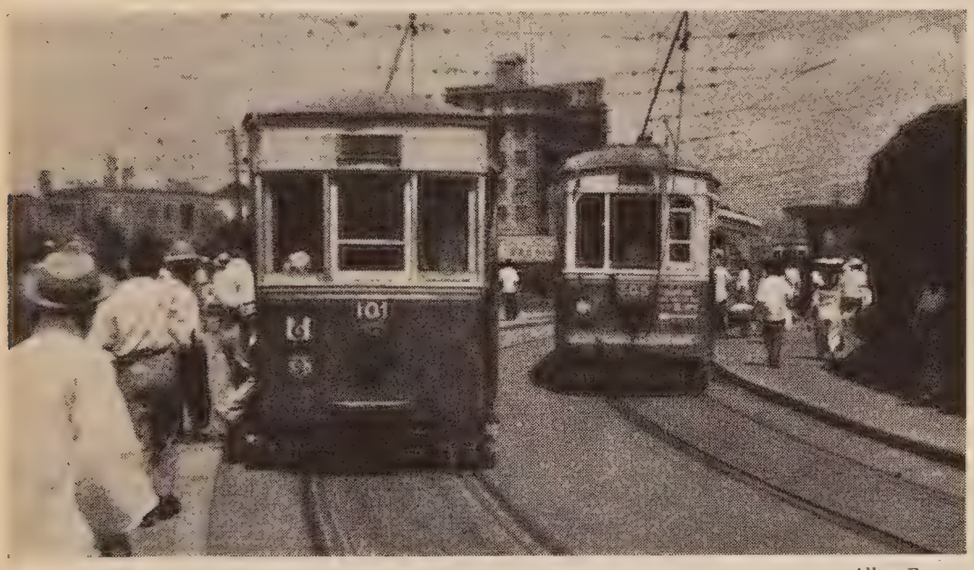
HOW MANY READERS remember the high-water cars used years ago on the Cincinnati Street Railway lines? According to Freeman Stokes, 604 Park St., McKeesport, Pa., they were used to transfer passengers for short distances in areas which habitually flooded during rainy weather. Without them, service would have been disrupted. Cincinnati had only a few of the cars, since only one line in the east end, Eastern Ave., and a few on the west end, were affected by the water.

Robert W. Richardson

Riders on a 1937 railfan special got out at Marblehead, O., and pushed the car up the steep grade at the end of line when approaching Ohio Public Service trolley reduced the power supply. Now, there's real love for you

Arthur Bodle

Long ago, each route of the Union Railroad Co., Providence, R. I., had its own distinguishing color. No. 81 ran to Arlington by way of Cranston Street.



Allan Berner

Lines serving the southern parts of Seoul, Korea, pass through the busy South Gate depot. (Above) Wooden single-trucker 101 and steel double-truck 305.

The cars, which were old single-truck open trolleys raised about three feet above their original trucks, ran in motor-trailer units with their trucks entirely under water. Extra running boards were added to enable the passengers to step up onto the car body. The motor was elevated on timbers above the already raised floor, and a sprocket chain from the motor connected with a sprocket on one axle, while the controller was raised a foot or more above the platform. In later years tracks built on extra ties carried regular cars across low spots formerly served by the high-water cars.

We wonder how many other cities solved flooding problems in this manner. The old Long Island Electric Railway used an open car with motors raised up above the floor to tow passenger cars over a particularly wet area in Hollis, Long Island.

TRAFFIC in New York City has reached the point where the only hope to preserve New York real estate values lies in more rapid-transit facilities into the city, reports the Metropolitan Transit Commission after a survey of vehicular traffic problems in the New York City area.

The Commission suggested that the four-mile Newark subway be incorporated in a New Jersey belt transit line to run north to Paterson, east to Hackensack or Englewood, and south to Elizabeth or Irvington, approximating some of the old routings of the Public Service trolley lines which once connected those towns via street running. Before scrapping its subway line, Rochester, N. Y., should note the value a

Cripple Creek District Museum

Colorado Springs & Cripple Creek M-204 at Cripple Creek, Colo., around 1900, shortly before the mining boom began to bust.

C. Searle

Cars 324 and 350 of the Bamberger Railroad at Salt Lake City, Utah, in 1946.

progressive inquiry commission places on such a route.

The report also recommended that the Long Island Rail Road and the New York subways be extended into New Jersey to relieve the present transit snarl in the New York-New Jersey metropolitan area, which, the Commission said, "is on the brink of catastrophe."

THE TROLLEY LINE between St. Louis and Florissant, Mo., mentioned in *The Last Interurbans* (Feb., 1955), was known as the St. Louis & Suburban, writes Jacques Coya, 5785B Second Ave., Montreal 36, Quebec. The line was first organized in 1876 as a narrow-gage steam line running between Grand and Olive streets in St. Louis to Florissant in the country. In 1885 the downtown portion between Sixth and Locust was rebuilt as a cable road, the first line of its type in the city. It was an immediate success, but the line's many short-radius curves demanded a lot of power, and the cables wore out so rapidly that the company went broke. Reorganized, the line was converted to electric trolley operation. The entire route was 29.5 miles in length, including the 10-mile Florissant portion. The St. Louis & Suburban had the distinction of being the first streetcar line in the United States to be used regularly as a United States mail route.

RAILS AROUND GOLD HILL, a full-length history by Morris Cafky of Colorado Springs and Cripple Creek rail lines, has particular interest for juice fans since, besides a number of steam lines, the area had two electric trolley routes from Colorado Springs to Cripple Creek using wooden cars of interurban appearance. These were the highest trolley lines in North America. At one point the cars rolled along at an altitude of over 10,000 feet. Copies of the book, a publication of the Rocky Mountain Railroad Club, 2561 S. Cook St., Denver 10, Colo., are available at ten dollars each.

A DOUBLE-DECKED TROLLEY hadn't been seen in our part of the world for a long time until the Seashore Electric Railway museum at Kennebunkport, Me., acquired car 144 of the Blackpool, England, Transport Department. A gift of the Blackpool town council, this car and others of its type have been replaced by modern ones on the tram routes of this British seashore resort town.

Anyone interested in sending donations to defray the cost of bringing car 144 across the Atlantic, should send his contribution to the New England Electric Railway Historical Society, 21 Carver Road, Newton Highlands 61, Mass.

The roster of Seashore equipment now numbers twenty-eight passenger and fourteen work cars. The oldest passenger car is an 1880 horsecar formerly used on the Union Street Railway lines of New Bedford, Conn., while the oldest passenger trolley is a parlor car, No. 925, which once ran on the West End Street Railway in Boston. No. 925 is one of a group of old Boston trolleys recently obtained from the Metropolitan Transit Authority collection.

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George Snyder

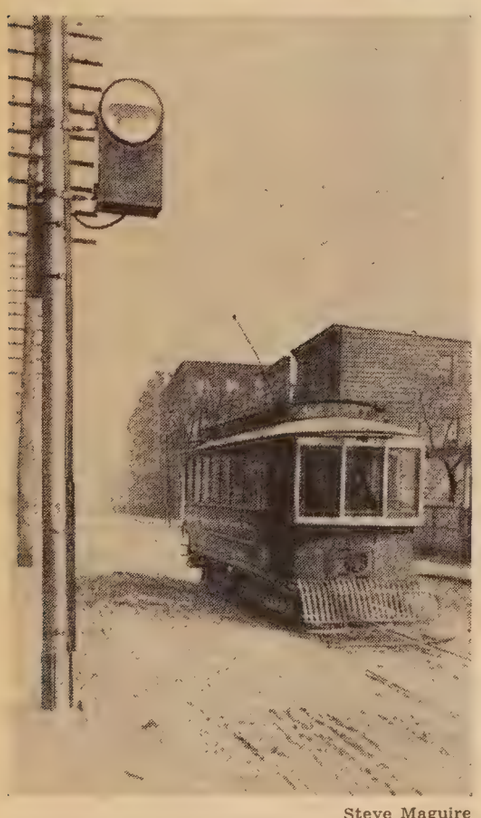
Training cars 225 and 222 of the new Cleveland Rapid on the Union Terminal bridge shortly before the new line was opened to the public last March.

Steve Maguire

Montreal & Southern Counties interurban 622 at Abbottsford, Que. in 1940.

Steve Maguire

New Jersey's Public Service C. T. No. 4 in Newark city subway, near Orange St.



Steve Maguire

Remember the oldtime pole signals? This one used in Newark, N. J., in 1905.

INTERURBAN LINES are still having a tough time. Latest reports from Iowa indicate that the Waterloo, Cedar Falls & Northern will soon give up its losing battle to operate passenger service between Waterloo, Cedar Rapids, and Waverly with its remaining passenger car, No. 100, and so the end will come for another interurban line. Electrified freight service will probably continue for a period, but experience would seem to indicate that eventually diesels will take over.

The new St. Lawrence River waterway may bring about the end of another interesting interurban route, the Montreal & Southern Counties Railway, which operates local and interurban cars out of Montreal, Quebec. The seaway project entails changes in the Victoria Bridge over the St. Lawrence, which the M&SC uses, and for this reason, among others, the company has applied for permission to give up its traction lines.

"I'LL ANSWER MY OWN QUESTION," writes Ed Watson, 934 Albemarle Road, Brooklyn 18, N. Y., who in a recent issue inquired whether anyone knew of any electric lines still in regular operation which were older than Brooklyn's Coney Island Avenue line.

"I've found one myself," he says, "without any help from any of your readers. The Atlantic Avenue line in Atlantic City, N. J., began electric operations on April 24, 1889, nearly a year before the Coney Island line was electrified, and the AC line is still going strong with Brilliners. The Coney Island Avenue line, which began with horsecars in 1862, may possibly be older in non-electric operation. The oldest streetcar line in the country at present is the Canal Street route in New Orleans which dates to 1834."

Mr. Watson, who is an authority on the history of the Brooklyn electric lines, says he hopes some day to prepare an all-time roster of B&QT equipment similar to Vincent Seyfried's recently published book on the Third Avenue Railway. Ed has material complete from 1900 to date, and is now working on rosters of cars before 1899 of which the memories of oldtimers are the only records available.

In an article on the Point Pleasant, N. J., Traction Co., which we compiled several years ago for *The Marker*, a publication of the North Jersey Chapter of NRHS, we mentioned that the Point Pleasant line bought five Lewis & Fowler open cars from the Brooklyn Heights Railroad in 1894.

"I can't discover any cars sold at that time," Ed says. "The Brooklyn electric lines had just opened and had no cars for sale. Could Lewis & Fowler have sent five cars meant for the Brooklyn line to Point Pleasant instead? Laconia built 1600-1604 for Brooklyn in 1894, but 1605-1648 were constructed by L&F. What I wonder is whether the five Laconia cars might not have been substituted when L&F sent the five to Point Pleasant. Can any of your readers remember back that far?"

THE END of reliable rail transportation on Philadelphia streets may be in sight, for National City Lines seems to have taken control of the Philadelphia Transportation Co., the nation's second largest trolley system, reports Donald Warner, Hotel Harris, Philadelphia, Pa. Shakeups in the organization are now in progress.

With PTC in NCL control, the only hope of Philadelphians lies in the Penn-

sylvania Public Utilities Commission, the sole arbiters of the right of a company to convert to buses or to abandon lines. Philadelphians should begin now to fight against what NCL will almost certainly do—scrap all possible rail lines, cut down service wherever possible, and generally liquidate the assets of the system, with the stockholders reaping high dividends, but leaving only a few very profitable lines—bus, of course—from which the remnants of a once-great transit system can take their profits. No wonder PTC stock soared from seven to fifteen dollars a share, once the news of NCL control became public.

Paul W. O'Rourke, President of local 234 of Transport Workers Union, has said, "We'll fight to keep them out. They're even worse than the present management. In other cities where they have gone, they have curtailed service, laid off enough help to pay for any wage increases . . . raised fares, and . . . declared tremendous dividends."

The general public has only the protection of the federal laws against trusts and monopolies, but, when the NCL with its background of gas, rubber, and bus interests takes over transit lines, apparently these laws are of little avail. The record of actions taken by the federal government in the past decade against the NCL trust only bears out the fact that we have no protection outside of the Utility Commissions—and little help they are!

BALTIMORE TRANSIT COMPANY'S application to put buses on line 26 to Sparrows' Point has been denied by the Maryland Public Utility Commission, on the grounds that the trolley service on the line could not be duplicated by buses. At the same time it denied BTC's application to take over the Dundalk Bus lines.

By any fair estimate the Sparrows' Point route justifies the retention of trolley service, but NCL doesn't want it, nor for that matter the trackless trolley route No. 10. The company did its best to get rid of the route several years ago when it cut the line back from downtown Baltimore to Highlandtown, forcing riders to change from PCC cars to trolley buses for the ride into downtown Baltimore. Just how NCL finally manages to get rid of the lines now that the PUC has denied its application will prove to be interesting.

FOR THE FIRST TIME in more than three years, last March 27 a train traveled on a Sunday the full length of New York's Third Avenue line, last of Manhattan's elevated railways. This last Sunday operation of the El, prior to the proposed abandonment of the service on May 12, was sponsored by the Metropolitan Transportation Club. The train made two round trips between 149th Street in the Bronx and Chatham Square, stopping at various stations along the way for photographers to record what would soon be history.

UNLESS the Ontario Municipal Board objects, by the time you read this, buses will be operating the old electric service of Canada's Grand River and Lake Erie & Northern Railways, according to Reginald E. Button, 61 Province St., S., Hamilton, Ont. The Board of Transport Commissioners recently approved the change.

Five years ago when the Canadian Pacific Railway, owner of the two lines, applied for permission to convert to buses, such an uproar arose that service was continued. But this time there was no organized opposition. The two companies claim they've lost $500,000 on passenger service. And certainly patronage hasn't been what it once was. In 1920, 2,098,076 customers rode the lines. By 1954 the number had shrunk to 160,000.

CPR, which already has buses in operation between Waterloo and Galt, will extend its lines to Simcoe and Hespeler. An independent bus company already runs between Simcoe and Port Dover.

The Grand River began operations on July 26, 1894, between Galt and Preston, was extended to Hespeler in January, 1896, to Berlin (Kitchener) on October 6, 1904, and still later to Waterloo. The Lake Erie & Northern, organized April 4, 1911, ran originally from Galt to Brantford and was extended to Simcoe and Port Dover in 1916.

AFTER TEN YEARS, trolleys are running again in Grantham Township near St. Catharines, Ontario, though now they are strictly for children, writes William C. Kessel, 25 East Quaker, Orchard Park, N. Y. The roads surrounding a Catholic school were so bad that buses were unable to reach the site, so the trolley freight line of the Niagara, St. Catharines & Toronto, which runs right past the school door, agreed to provide service to and from school for the kids, five days a week.

Buses also gave up under the strain not long ago in Jacksonville, Ill., writes Candy McCarthy, 315 South Florence, Springfield, Mo. Apparently the service was unprofitable. Nobody knew in advance that the Elm City Lines were going to abandon operations, not even city officials. And so Jacksonville woke up one morning to find it had no public transportation. A hospital on the outskirts of the city was particularly hard hit because nurses and other personnel had no way of getting to work. Jacksonville buses have gone to Columbia for service on other lines owned by the company.

THE LONG AWAITED DAY for the final completion of Cleveland Transit System's Rapid arrived March 12. "Shortly after eleven o'clock," writes Max E. Wilcox, 429 West Ave., Elyria, O., " a group of dignitaries gathered at Windemere Terminal, made a few speeches, and cut the tape officially opening the terminal to the public.

"There was such a mob at Windemere I had to ride the second scheduled train out. Some 18 minutes later we were downtown, a distance of eight miles. In the old days it took 35 to 40 minutes to make the same trip. There are seven stations on the route and allowing for station stops the trains make an average speed of 36 miles an hour. The system is all welded rail, and cars use pantographs instead of conventional trolley pole.

"Outbound from the Terminal, the Shaker Heights Rapid shares their eastbound tracks with the CTS to 44th St. Inbound they maintain their own routes. Schedules are arranged so that they do not conflict with each other. A new era has opened for the electrics in Cleveland, and I am convinced that the electric lines were born a generation too early."

OUR REFUSAL to consider the present Key System lines as interurban in character in *The Last Interurbans* (Feb., 1955) brings an objection from Richard L. Kolm, 100 Vasquez Ave., San Francisco, Calif. Says Mr. Kolm, "I don't think the Key System ever was more of an interurban than it is today. Before the completion of the Bay Bridge in 1937, trains terminated in Oakland on a pier jutting out about three miles into San Francisco Bay. At one time the Sacramento Northern interurbans used the same facilities. The five Key lines in Oakland, Berkeley, and Piedmont are substantially unchanged." ●

A Distinguished Railfan

NEW HAMPSHIRE'S Governor Lane Dwinell makes a point of interrupting his travels, whenever possible, to observe train operation at division points. The Governor is like that, reports his friend, James D. Squires. The Governor himself will tell you why.

"I was born and spent my early life in what was then the active railroad town of Newport, Vt.," he recalls. "Fascination for the roundhouse, the chugging triple-headed freight trains, the constant switching activity in the yards, the association in school with boys whose fathers actually ran the locomotives, the general excitement and thrill of watching something continuously in motion, the association that the railroad gave with as-yet-unseen places far away—all of these are memories of my early days."

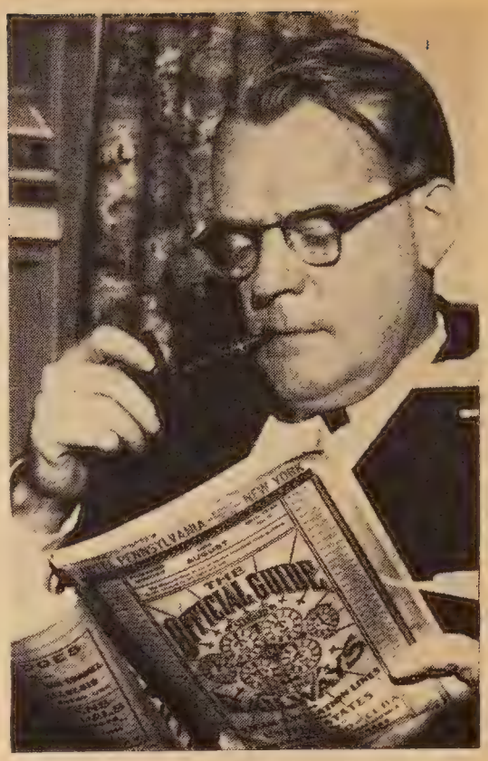
Newport at that time was a freight terminal for consolidating bulk shipments westbound for Canada. Mr. Dwinell has lively recollections of how trains were made up there and dispatched and how the grades out of Newport were so steep that even a 40-car Canadian Pacific freight needed three engines at the head and a helper on the rear. He remembers, too, Boston & Maine passenger train No. 5, the *Alouette,* that ran nightly for more than fifty years from Boston to Montreal via Newport.

Today the Governor, in between bouts with the state's budget, finds relaxation in collecting and studying railroadiana. Neatly stacked in the attic of his home at Lebanon, N. H., are more than 100 copies of *Railroad Magazine,* along with other railroad literature. A room in his home is covered with railroad-motif wallpaper.

Among his possessions is a fine miniature replica of a Pennsy boxcar, built by himself and attached to a scale model of the *C. P. Huntington,* the Southern Pacific's first engine. Governor Dwinell is, or has been, a member of the Railway and Locomotive Historical Society, the National Railway Historical Society, and the Newcomen Society.

His specialty is collecting timetables and railway guides, his oldest specimens being a Portland & Ogdensburg (now Maine Central) timetable and a copy of the *International Railway and Steam Navigation Guide* for 1871. He likes to compare the operating schedules of name-trains at various dates. For instance, he has carefully worked out a chart of the Milwaukee Road's *Olympian* as it ran in 1916 and in 1940, showing times and places for each stop between Chicago and Tacoma.

Mr. Dwinell also compares old railroad maps with those of today. He has closely analyzed the Maine

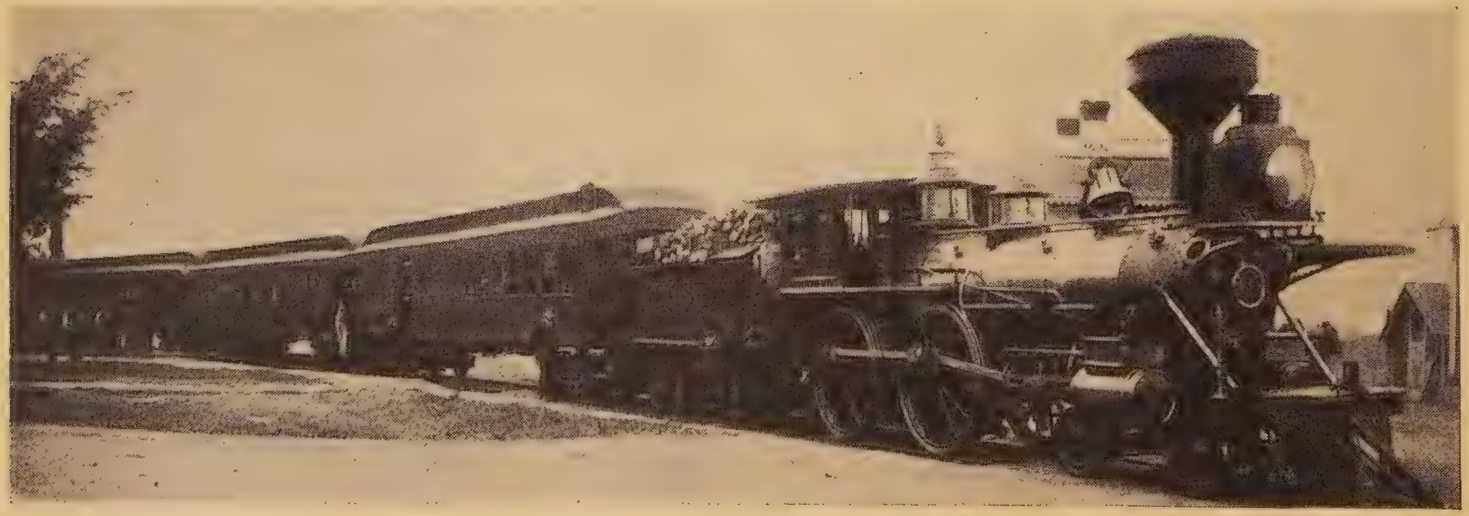


The Governor looks the *Guide* over.

Central trackage in Coose County, N. H., knows every mile of it, and can tell you who built each section and how it happens that out of the three originally separate and competing lines only one remains.

As Governor, he is much interested in New Hampshire's transportation problems and naturally sympathizes with the railroads' plight. When his day's work is done, you are as likely as not to find him in his study poring over *Official Guides.*

"Let's see," he muses, "when did the *Oriental Express* stop at Grand Forks, N. D., in 1916 and what is the current arrival time of the *Western Star* at that point?" ●



From Governor Dwinell's Collection

Among the Governor's favorite railroad photographs is this one, taken around 1870. It shows Canadian Pacific 19, the *Albert Knight,* at Newport, Vt., the Canadian border town where Mr. Dwinell grew up and became interested in railroads.

From Governor Dwinell's Collection

Canadian Pacific woodburner at the Memphremagog House at Newport, Vt., in 1869.

STEAM POWER

IN THE UNITED STATES AND CANADA

MAINE CENTRAL employe, Wayne A. Lancaster of Auburn, finds it hard to believe that the MeC has any steamers stored at Waterville, as indicated in our April list. "Mikes 623 and 625," he writes, "went to the scrapyard at Worcester late in June, 1954, in Waterville-Rigby local freight WR-4. Others were scrapped at Waterville the same summer. The only steam engine on MeC property is 470 serving as a memorial to steam at Waterville. The locomotive at Rigby in South Portland is a Hudson, 702, which has been converted to a snowmelter because of her high-pressure boiler."

The Louisville & Wadley (not Hadley, everybody tells us) and the Wadley Southern run mixed steam trains at the moment, though diesel power is expected at any time.

The Rahway Valley has no 2-8-2's in storage, only two 2-8-0's.

This month's list was compiled from reports from David Holway, Attleboro, Mass.; Richard B. Baldwin, Jr., Derby, Me.; C. H. Blackburn, Lima, O.; C. R. Waterman, Grand Rapids, Mich.; Wayne Bridges, Delavan, Ill.; William H. Berman, Brooklyn, N. Y.; Mallory H. Ferrell, Backsburg, Va.; Tommy Lawson, Dave Heck, Bill Haga, Ronald Chandler, Donald Maulick, Rodger Darling, Wally Young, Bob Larson, Harold Buckley, Jr., Birmingham, Ala.; A. J. Pond, Richford, Vt.; Bill Corben, Kansas City, Mo.; Stanley D. Crews, Waynesboro, Tenn.; Roy G. Clark, Odessa, Fla.; Adam Viellieux, Somerset, Wis.; R. Achilles, Cranford, N. J.; S. D. Marty, C. W. Kinger, Richmond, Va.; and Joe Stauber, Marshfield, Wis. Previous steam power lists have appeared in the issues for Sept., Dec., 1954 and Jan.-June, 1955. Unfortunately we cannot guarantee accuracy.

Atchison, Topeka & Santa Fe—Argentine Yard Roundhouse, Kansas City, Kans.—4-6-4, others, stored.

Atlantic Creosoting Co.—Portsmouth, Va.—0-4-0T.

American Vicose Corp.—Elizabethton, Tenn.—0-6-0 fireless.

Bangor & Aroostook—back yard shop, Derby, Oakfield, Me.—4-6-2, 2-8-0.

Boston & Maine—North Station, Boston, Mass.—2-6-0's, 4-6-2's, 2-8-0, 0-8-0's, 4-6-2, stored.

Brooklyn Eastern District Terminal—Brooklyn Navy yards, Greenpoint, Long Island City, N. Y.—9 oil-burning saddle tanks.

Canadian National—Vancouver Island, B. C.—0-6-0's, 2-8-0's.

Canadian Pacific—Brownsville Jct., Presque Isle, Fort Fairfield, Caribou, Me.; Montreal, Que.-St. Johns, N. B. (International of Maine, Division); Farham, Que.—2-8-2's, 4-6-0's.

Carolina Southern—Ahoskie, N. C.—2-6-0.

Chesapeake & Ohio—Grand Rapids, Mich.—six 1200 class steamers, rusting away; Holland, Mich.—2-8-4's, dead.

Chicago & Illinois Midland—all points—100% steam.

Chicago & North Western—Manitowoc, Wis.—0-6-0's; Maywood, Ill.—4-6-2.

Chicago, Milwaukee, St. Paul & Pacific—Maywood, Ill.—2-8-2's.

Chicago, St. Paul, Minneapolis & Omaha—Eau Claire, Wis.—4-6-0's, 2-8-2's, 4-6-2's, 0-6-0's; Marshfield, Wis.—0-6-0.

David M. Lea & Co.—Richmond, Va.—0-4-0T's.

Detroit, Toledo & Ironton—Allen Park-Flat Rock, Mich.—2-8-0, 2-8-2.

Government Line—Silver Springs, Md.—0-4-0.

Grand Trunk—Island Pond, Vt.-Portland, Me.—steam on passenger train soon to be scrapped.

Grand Trunk Western—Muskegon-Durand-Detroit, Mich., local freight, 2 passenger trains daily; Grand Rapids-Grand Haven, Mich.—2-8-0; Grand Rapids-Detroit—4-6-2's; Grand Rapids-Chicago—4-8-4's; Detroit—0-8-0's, 0-8-2's, 2-8-2's.

Gray Lumber Co.—Waverly, Va.—ex-Southern 3-foot gage 2-6-2.

Gwaltney Meat plant—Smithfield, Va.—2-6-2T abandoned in nearby gulch.

Illinois Central—Maywood, Ill.—4-8-2's; Peoria, Ill.—0-8-0; Clinton-Haven branch—2-8-2's.

Louisville & Nashville—Mobile, Ala.—4-6-2, No. 152, on exhibition at station.

Marinette, Tomahawk & Western—one 2-6-0, four 4-6-0's.

New York, New Haven & Hartford—Providence, R. I.; New Haven, Conn.—2-8-2, stored.

New York Central—Carey, O.—4-8-2's; Nation, O.—4-6-4; Bellefontaine, O.—2-8-2's, 4-8-2's, 4-8-4's, 4-6-4's; Detroit, Mich.—2-8-2's, 4-6-2's, 4-8-2's, 4-8-4's, 4-6-4's; Elkhart, Ind.—4-8-4's; Grand Rapids, Mich.—2-8-2's, 4-8-2's; (Michigan Central)—Grand Rapids-Jackson, Mich.—occasionally.

Nicholson Terminal & Dock—Allen Park, Mich.—0-6-0's.

Nickel Plate—Fostoria, O.—2-8-4's; Lima, O.—0-6-0, 2-8-2, 4-8-2.

Norfolk & Portsmouth Belt Line—Portsmouth, Va.—0-6-0's, 2-8-0's.

Potomac Electric Power Co.—Silver Springs, Md.—0-4-0T.

Richmond, Fredericksburg & Potomac—Richmond, Va.—4-8-4's, stored.

Smith Sand & Gravel Co.—Branchville, Md.—Abandoned 0-4-0T, 0-4-2T in use.

Soo—Eau Claire, Wis.—2-8-0; Chippewa Falls, Wis.—4-8-4's, 4-8-2's, 4-6-2's, 2-8-2's.

Trap Rock Quarry—Dresser Jct., Wis.—0-4-0T.

Tredegar Iron Co.—Richmond, Va.—0-6-0T.

Union Pacific—Kansas City, Kans.—0-6-0's, 2-8-0's, 2-8-2's, 4-8-2's, 2-10-2's, and 4-12-2. No. 816, 4-8-4 runs occasionally Kansas City-Salina on time freight, trains 154-155; Topeka, Kans.—2-8-0, in yards, 2-8-2's stored.

Virginia Electric & Power Co.—Richmond, Va.—0-4-0 fireless.

Washington Terminal Co.—Washington, D. C.—0-6-0's, stored.

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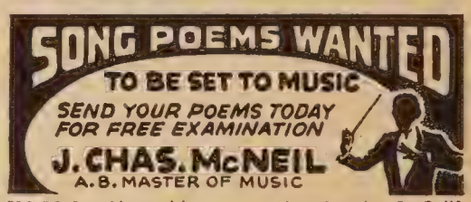

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Books of the Rails

GRIERSON'S RAID, by D. Alexander Brown, University of Illinois Press, Urbana, Ill., illustrated, 261 pages, $4.

ON APRIL 17, 1863, Col. Benjamin Grierson and a troop of 1700 cavalry plunged deep into Southern territory. Their object was to cut Vicksburg's railroad lifeline and to divert Southern troops from the defense of the embattled city.

Mr. Brown's narrative has all the excitement and suspense of fiction, but railroadists will also be interested in glancing accounts of the Mississippi railroads which the raiders skirt and cross, rip up and destroy in their feverish, headlong dash.

ILLINOIS TRACTION SYSTEM, Trolley Sparks, Bulletin 98, Central Electric Railfans' Association, Box 503, Chicago 90, Ill., illustrated, 84 pages, paperbound, $6.

THE ILLINOIS TERMINAL and its predecessor, Illinois Traction, form a complicated but fascinating interurban empire, now on the verge of complete dieselization. In its great days, the IT ranged across Iowa, Kansas, Missouri, and Nebraska, as well as central Illinois. Its history includes nearly every modern transportation development—city lines and interurbans, steam locomotives and diesels, single-truck Birneys and multiple-unit streamliners, 70-car freights and sleeping and parlor observation cars. They're all here, along with timetables, rosters of steam and electric locomotives and equipment, maps, and hundreds of photographs, unfortunately not very well reproduced.

BRITISH RAILWAY HISTORY, Vol. 1, 1830-'76, by Hamilton Ellis, The Macmillan Co., New York, illustrated, 443 pages, $6.75.

THIS FIRST VOLUME in a monumental history of British Railways is a masterful job, though American readers, to whom British railways are mere names and not sagas to fire the imagination, will probably find some of it heavy going.

But elsewhere are colorful glimpses of English railfaring life—the traveling ladies struggling in primitive coaches with the problem of propriety in the face of nature's functions, the roofless third-class carriages where men rode less well than hogs, the burling swaggering Navvies who gouged the roads out of England's green and pleasant land, the towering titans and tycoons who dreamed or bludgeoned their lines into being, the wars of the gages, the grandiose projects like trans-Channel tunnels, the thrills, the excitement, the disasters that belong uniquely to railroading everywhere.

Here also are the forgotten steam carriages, steam-powered motorbuses which, like their gas-propelled descendants, were syphoning off rail passenger traffic a hundred years ago. Here are authoritative discussions of motive power and rolling stock, architecture and structures, operations and construction.

American and British rail history are markedly similar. The sporadic, early experiments gave way to a breathtaking period of expansion when robber barons ruled and the stock market crashed and soared. A period of consolidation followed during which smaller roads were merged into systems. In Britain, the size of these systems and their status as public utilities finally made nationalization seem logical and inevitable. There, of course, the parallel breaks down.

Maps are missing, motive power photographs are few and far between, and you may be confused until you realize a *goods wagon* is a freight car, or a *sleeper* a tie, but these are minor difficulties in an otherwise excellent book.

THE LAST BROAD GAGE, by Robert R. Brown, Bulletin No. 18, Canadian Railroad Historical Association, Inc., 6959 De l'Epee Ave., Montreal, Quebec, Canada, 6 pages, 25 cents.

IN OCTOBER, 1854, the first segment (Carillon to Glenville) of a projected railway between Montreal and Bytown (now Ottawa), Canada, was completed. Plans for the rest of the line collapsed when one of the promoters lost the company's money and his life in a shipwreck. Financial troubles hampered the passenger line thereafter, but it survived somehow until 1914 as a reminder that Canada's standard gage was once 5 feet 6 inches.

Mr. Brown tells his story well, and there's an excellent map, a photo of one of the old broad-gagers, and some notes on rolling stock.

APPLICATION OF MODERN SCIENTIFIC RESEARCH ON RAILROADS OF THE UNITED STATES, by Loyd J. Kiernan, Association of American Railroads, Transportation Building, Washington 6, D. C., illustrated, 29 pages, free.

A SURVEY of recent achievements of research in every phase of railroad operations, conducted largely in an effort to cut costs and increase efficiency.

SOUVENIR BOOKLET, *The Train to Yesterday,* by Thomas T. Taber but much more comprehensive than the article of that title he wrote for our June issue, is being sold by the Railroadians of America as part of a campaign to publicize the D&RGW narrow-gage Silverton line. It has 16 pages, slightly larger than *Railroad Magazine's* page size, printed on thick coated paper, beautifully illustrated with photos, maps, and line drawings, plus a semi-stiff cover. This new booklet may be obtained at $1 per copy from the Railroadians' treasurer, Halsey L. Tilton, 761 W. Inman Ave., Rahway, N. J.

COMING MONTHS will see publication of a novel by James P. McCague called *The Big Ivy,* "a railroad story from the ballast up." Born and reared in the shadow of New York Central's Englewood roundhouse, Chicago, McCague worked for a while as work-report clerk and crew caller at Englewood. His father, Charley McCague, was a Lake Shore & Michigan Southern hogger who pulled the *Twentieth Century Limited.* ●

SWITCH-SHANTY YARN

(Continued from page 25)

the gangway. Pretty soon each man of the crew filed into the warm and well-lit shanty, stamping the snow off his brogans and putting out his lantern with an expert jerk.

"Looks like the early end of a night's work," grunted the foreman. "Accordin' to the dispatcher, there's no drags this side of Pokaloo (Pocatello), and the snowplows will be lucky to get the passenger trains through. The San Pedro line also is tied up. It's one helluva night."

The three men pealed off their

overshoes and layers of coats and sweaters that had armored them against the freezing wind, and the Kid crammed the glowing pot-bellied stove with coal.

O'Leary was dragging a couple of benches to form a bed. He stopped midway and said: "Hey, Kid, I saw your old man at the Palace this afternoon. He's good. The things he can lift! I wouldn't want to be in his way if he got mad."

"I wouldn't either," grinned the Kid.

"Better call me before the day bunch shows up," O'Leary said. "I'm usin' their clothes for beddin'."

BUT BEFORE O'Leary could tuck himself in bed for a few hours of sweet repose, the night yardmaster strode in.

"Hey, Bill," he bellowed, wiping the icicles off his walrus mustache, "you know them sixteen cars o' sheep you put on the head end o' the Sandy local for tomorrow mornin'?"

"Yeah," yawned the sleepy foreman, "what about 'em?"

"Nuthin', except they've been loaded nearly forty-eight hours. You know what that means. Time's up at two A.M. The sheepherder that's with 'em won't sign a release so we can hold 'em for the local in the mornin'. Them critters hafta be hauled to Sandy and unloaded tonight, snow or no snow—and you guys are elected for the job!"

It took a little time for that last crack to sink in. But as soon as it did, the three musketeers raised a howl of pure anguish.

"For Pete's sake," Six-Shooter said to the ringmaster, "do you mean to tell us that *we've* got to drag them woollies to Sandy and unload 'em in a ragin' blizzard?"

"That's the general idea."

"It'll cost the Oregon Short Line a hundred miles at road pay besides our pay as switchmen," protester O'Leary, who knew the Stinger (Trainmen's) agreement forward and backward and thus qualified as a switch-shanty lawyer.

"Yeah," the Kid chimed in. "Why not call a road crew for the job and leave us alone?"

The ringmaster said: "By the time I gave a road crew a two-hour call and they got to Sandy with the sheep, we'd be 'way past the time limit and subject to a fine. Now, are you tramps gonna shake the lead outa your pants and get started or will you refuse and be hit with a time check tomorrow?"

Glumly the three switchmen devoured the contents of their nose-bags. With moans and groans they put on their coats, sweaters, overcoats, gloves, and Arctics. Then they re-lit their Tom Moores and stumbled out into the storm, still cussing and wailing, to break the bad news to the engine crew.

The hoghead was a floater named Sam Blake who'd been "made" on the Canadian Pacific. Blake knew a lot of French-Canadian cuss words as well as the standard switch-shanty English. His opinions on the morals and ancestry of the night ringmaster and the night-trick dispatcher were so entertaining that all hands actually felt a little better after hearing them.

They backed the switch engine onto the sixteen cars of sheep, which were bleating from hunger and general discomfort, and tested the air. Six-Shooter got a clearance and a running order from the dispatcher's office. The running order was a mere formality, as there were no night trains operating on the twenty-mile Sandy branch at the time.

Then they summoned the shepherd, a black-bearded guy with a cadaverous face, from his post beside the yard-office stove, and the gang set sail. The relief expedition was on its way. Reaching the far end of the lead, far enough from the yard office to be unobserved in the storm, they backed onto the east end of the caboose track and picked up a crummy.

"No sense in ridin' a drawbar twenty miles on a night like this," opined Six-Shooter, and the others nodded agreement.

They had no key to the caboose, but that was a trifling matter. All they had to do was kick open the door, light the markers, coal up the stove, and make themselves at home—which they did. O'Leary asked hopefully if the shepherd had a bottle.

The pastoral gentleman shook his head. "I brung a quart back with me when I went uptown for supper," said he, "but I made the mistake of uncorkin' it in the presence of the yardmaster. Him and his clerk and the dispatcher helped me to kill it."

"They would," muttered the Kid.

None of the crew had ever been in Sandy. Arriving there after a run of about forty-five minutes, they hit the snowdrifts and waded around in the stormy darkness for about a half-hour or so in a vain effort to find the stock chutes.

"Well," said the foreman at length, "there's a phone in the depot. We'll kick the door in and tell the dispatcher our problem."

HE CRANKED the dispatcher's phone bell by hand. Its jangling aroused the dispatcher, apparently from a sound snooze, and his thick voice denied all knowledge of Sandy's topography and railroad facilities.

"I'll put the yardmaster on the phone," he added.

After the Y.M. had been shaken out of slumber, he announced: "There is no stock chute at Sandy. You'll have to clear the house track and unload the woollies on the station platform."

"I could have told you that much," said the sheepman, puffing a cheap cigar.

"Then why in hell didn't you?" Six-Shooter demanded.

"I never tell railroad men nothin'. They know it all anyhow."

The crew cut off their engine to clear the north end of the house track, ran her down to the other end, and backed through. Then they coupled up the air on the six house cars and the drag, after which they pulled ahead and spotted six cars of sheep at the platform.

Half an hour later the disgruntled foreman, Six-Shooter Bill, was again twisting the tail of the antique depot phone.

"What's wrong now?" asked the dispatcher, not too kindly.

"The sheepman opened the doors and fixed the runways, but the sheep got more sense than we have. They won't come out in this storm. Whadda we do now?"

A crisp voice cut in: "This is the yardmaster. Those sheep have got to be unloaded by two 'clock sharp!"

Six-Shooter grinned. "You'd better

tell that to the baa-lambs. As fast as the shepherd drags one or two of 'em out of the car they bust right back in again. They don't know how to co-operate."

"You fellows go out there and help the sheepman! Grab the critters by the wool and drag 'em out! Once you get a dozen or so on the station platform, the rest will follow —"

"Wait a minute!" Bill protested. "We hired out on the Oregon Short Line as switchmen, *not* sheepherders." Wrath filled his soul. "We refuse to drag any mutton around—and neither you nor anyone else can fire a man for standing on his rights."

The ringmaster backed down then. Said he: "The only other move I can think of is to call out the section gang. Will you do that?"

"Where do they live at?"

"Hold the phone while I check up."

Bill held the phone. But by and by he got tired of nursing the receiver. Fully half an hour passed before the bell jingled.

"It's no use," the yardmaster said in despair. "The section men at Sandy live all over the valley. You'll just have to stick around till they show up at seven o'clock. And don't pester me again! I've done all I could to get the sheep unloaded."

Bill hung up. While all this was going on, the Kid and O'Leary had built a roaring fire in the depot stove. Staying there was a lot easier than walking back to the caboose through the deep snow. The switchmen disposed themselves as comfortably as they could and hit the hay, being possessed of the boomers' happy ability to sleep at any time and any place.

But the bearded sheepman did not settle down to slumber. He kept prowling around nervously in and out of the station agent's office. Finally, when the wall clock showed a few minutes after six a.m., he shook the engine foreman awake.

"How'd you like to have a lil' snort this mornin'?" he queried.

Bill favored the idea. So did the Kid and James Finnegan O'Leary. The shepherd led the way across Sandy's one street to a gaunt frame building whose windows glowed with promise, and the three railroaders tailed close behind.

SNOW HAD CEASED to fall, but a bitter wind was blowing the icy whiteness into swirls and streamers along the frozen ground. The thermometer must have registered a foot or so below zero. Each man's nose and mouth emitted clouds of frozen breath like the steam from a Mikado climbing a mountain grade with fifty cars. In due time all four bellied up to the bar.

"I live right here in Sandy," the sheepman said affably. "I knowed that Jake here would be openin' up about six."

He slapped a ten-dollar gold piece on the bar.

"Jake," he said, "these railroad boys have had a tough time tryin' to help me out. Give 'em anything they want."

"Better go easy, pardner," cautioned O'Leary. "You don't know how much a switchman can drink."

"Well, we'll find out," replied the sheepman. "And don't think about the expense. I own them sheep out there and twenty thousand more. Why worry? I spend a dollar like it was an autumn leaf and I had a whole forest. Most any time now a bunch of my hands will be along to take charge of the woollies. Meanwhile, fill 'er up, boys!"

While the four men were drinking breakfast, the station agent made his way into the gin mill.

By and by the ranch hands showed up in battered Stetsons, high-heeled boots, and sheepskin-lined coats. Aided by the gandy dancers, they began to unload the sheep. The three switchmen took turns at spotting the cars, while the fireman ran the engine, the hogger having declared himself in on the party at Jake's.

By seven-thirty the sixteen cars had been unloaded, and the station agent phoned the dispatcher for orders. The latter came through with a 31 order and a message. The 31 directed the switch engine to run extra from Sandy to the North Yard in Salt Lake City, meeting en route four extras, the Sandy local, and the branch passenger train at a siding named Hustlers, between Salt Lake and Murray. Those four extras were switch engines which left the North Yard every morning and did the chores around the copper smelters at Murray. The message read:

Engine foreman will re-spot house track and bring the 16 (sixteen) empty stock cars to North Yard.

Six-Shooter snorted. "The engine foreman will, will he? That's what *you* think. Tell that mug I'm gonna shove them stock cars in on the passin' track, grab the caboose, and high-tail it for home."

"Have you tramps got a caboose out there?" You could have heard the dispatcher's bellow all over the office. "The crew of the San Pedro line that owns it were called for five o'clock. We've checked the whole damn yard trying to find it. That road crew has been on terminal overtime for two hours now and if we call another crew this bunch will turn in a run-around to boot! Never mind the stock cars. Get that hack in here pronto!"

The yard crew took the 'gine for a quick trip around the wye. Then they picked up the purloined crummy and headed back toward Salt Lake City. They would probably have reached the North Yard without further ado, and the various misdemeanors of the night would have been glossed over, but for one thing. An inspiration blossomed in the brain of Hogger Blake.

You must remember that the switchmen in sharing the shepherd's hospitality at Jake's, were several drinks ahead of the engineer. They were ready to call it a day and hit the feathers as soon as they could get to Salt Lake City and turn in. But destiny willed it otherwise. The throttle-jerker was three or four slugs short of inebriation and he aimed to do something about it.

Slamming on the emergency brake, he slid the wheels to a stop that almost stood the goat on her nose. By that time they were just about a mile out of Murray. The yard-crew foreman, Six-Shooter Bill, hit the snowy ground to learn the cause of the delay.

Blake unburdened himself thus: "I just happened to think that I am paid up in advance at a certain gin mill hereabouts. So if you'll head us in on the spur behind the grain elevator, we can collect a few slugs of redeye."

"But," protested Bill, "we've got a meet with the branch passenger train, and the local freight, and all—"

"So what? I have made a phenomenal run to date. The dispatcher don't know for sure what time we left Sandy. It won't take us more than ten minutes to gulp those drinks and get under way again."

"In that case," the Kid butted in, "what's the idea of heading in on the grain elevator spur? Why don't we just park on the main line?"

"Because the station agent would walk out on the platform and spot us tying up the main stem. But if we head in here, the big elevator building will hide us, and all he can tell the dispatcher is that we ain't in sight yet."

THIS LOGIC was irrefutable. Once in the bar room, with the goat tucked away snugly out of vision, you would have been surprised to see how rapidly tempus fugited and how little attention the crew paid to its passing. Some forty-five minutes later, however, the station agent at Murray stamped into the alcoholic joint and fixed the miscreants with a fishy eye.

"You men have got the world tied up," he accused. "The dispatcher has been burning the wires. I happened to see engine smoke painting the sky behind the grain elevator, so I investigated. What are you gonna do now? I'll just have to tell 'em something."

"Tell 'em we've gone," suggested Bill, hastily draining his glass. "Tell 'em we're practically in Salt Lake right now."

The crew filed out of the tavern and boarded their train. In no time at all they were traveling back to their home base.

At Hustlers siding they found a collection of trains waiting. The traffic included the Sandy local freight and the four Murray switch engines, each with a small drag of cars tied to her tail. The head brakeman on the passenger train had lined the gate for the siding and then crawled back up into the smoker for some unexpected rest.

O'Leary glanced at the jam and shrugged his shoulders. "Wonder why those clowns didn't put out a flagman and proceed into Murray?"

The foreman smirked. "For the same reason that we wouldn't have done it if we'd been in their place. Them fellows are just as lazy as we are—and I can't see any of us wadin' snowdrifts for three miles just to get a dispatcher out of a hole."

Engineer Blake slowed just barely enough to take the curve into the passing track without turning over. And he made it. Amid derisive whistle hoots from delayed trains and a chorus of jeers and catcalls from the crews, they traversed the passing track and let themselves out onto the main line again.

At the North Yard, the reception committee that greeted them was headed by the general yardmaster and included the day conductor, the aggrieved road crew whose caboose they had "borrowed," the day-trick dispatcher, and the callboy. Also in that goodly number were the day yard-engine crew and half a dozen section hands.

The ringmaster's words of welcome were heard above the rest.

"You're fired," he barked, "the whole drunken bunch of you! Get your time at the super's office! But first put that crummy on the caboose track and turn your engine into the house! You can demand a formal hearing if you want to."

But none of them did. As it turned out, all the culprits except the Kid hit the boomer trail again, through the snow-filled valleys of the West. Why the Kid stayed with the Oregon Short Line, at least until I met him two years later, is more than I can say.

Maybe the ringmaster gave him thirty days without pay and kept him on because he was young and not so much to blame. But that's not the way I heard it. As I stated a while back, his father was Hercules the Strong Man of the Keith vaudeville circuit. The old guy was billed in Salt Lake City around the time of the sheep-car escapade, and he had a reputation for being mean and beating people up. Maybe that had something to do with it. I don't know. You hear a lot of things around a switch shanty. ●

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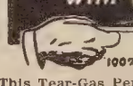

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With the mighty Rockies as a backdrop, a Canadian Pacific fast freight crosses Ladner Creek bridge in British Columbia's Coquihalla Pass. Diesel units 4057 and 4452 gleam with stainless steel, red, and gold. On front is the famous beaver emblem.

MAIL CAR

(Continued from page 11)

102 YEARS ago the locomotive *Opelousas* was lost at sea. She was being shipped from the Baldwin Works in Philadelphia to New Orleans by boat. The ship sank while rounding Key West, Fla. Wreckers managed to raise the sunken locomotive. After being overhauled, she was put to work constructing the Southern Pacific line out of New Orleans. •

THIS summer the Long Island expects to get delivery on the first 15 of the 125 new air-conditioned passenger cars it ordered from Pullman-Standard for delivery in 1955. Each of these cars for "the world's largest commuter road" will seat 120 passengers in reversible-back seats and have fluorescent lighting, rubber tile floors, overhead parcel racks, and coat hooks at each seat location. •

WHY HE STOPPED. Leon Barefield, 1857 S. Lafayette, Denver 10, Colo., sends us this clipping about a steam-powered passenger train on the Denver & Rio Grande Western, from the *Rocky Mountain News* of January 18, 1948:

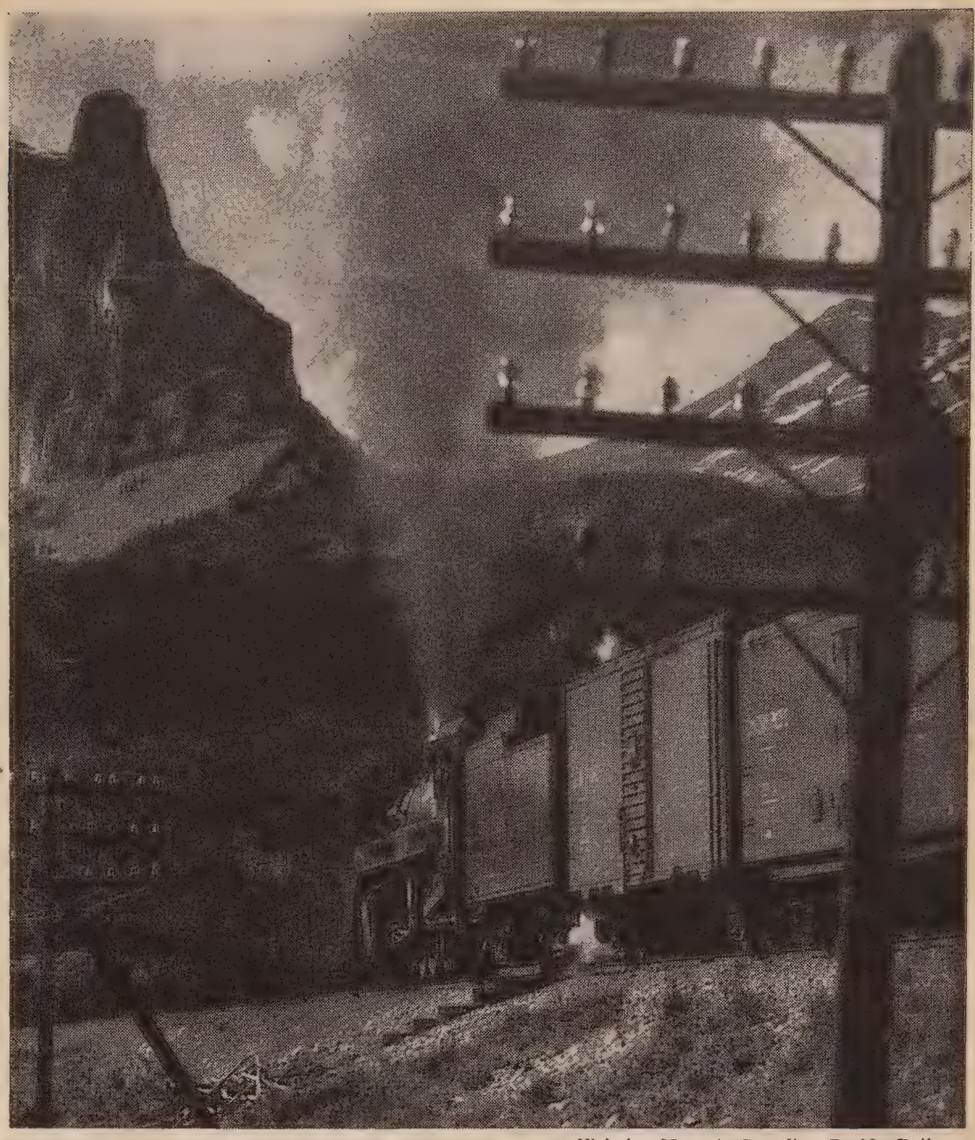
Westbound No. 3 was chugging along the Moffat road, late and trying to make up for lost time. In the midst of a blizzard, she crept out of Fraser Canyon, whistled for the Granby crossing, and sped across the Granby flats.

Eastbound No. 2 out of Craig reached Corona the next morning, and the engineer reported he had not seen No. 3 anywhere along the way. A searching party set out and found her parked in the middle of the town of Granby. She had jumped the tracks at the crossing, and traveled for a mile along the frozen highway!

Asked at a hearing why he hadn't stopped when he jumped the tracks, the engineer said he didn't know they were derailed, as he couldn't see out the cab window, the falling snow being so thick. Then the inquisitor asked why he had stopped at all.

"Well," said the engineer, "I knew something must be wrong, because the going was too smooth west of Fraser Canyon." •

UNION PACIFIC has just been given the 1954 Public Relations Award of the Federation for Railway Progress "in recognition of the UP's extraordinary contribution to the field of public relations by its 'Wish You Were Here' campaign which pointed out in dramatic fashion to readers of travel pages in the nation's papers the scenic beauty and advantages of a vacation in the Great American West." Robert R. Young, FRP founder, made the presentation. •



Nicholas Morant, Canadian Pacific Railway

Cathedral Mountain in British Columbia, just over the Great Divide, towers majestically above a Canadian Pacific fast freight wheeled by No. 5430.

ONLY in Boston can you find a religious edifice inside of a railroad terminal, reports Jack Haggerty, Box 51, Boston 1, Mass. The beautiful new chapel of Our Lady of the Railways in South Station was dedicated last February 21 by Roman Catholic Archbishop Cushing, with about 3000 spectators. As the chapel seats only 500, the rest gathered in the station concourse. The New Haven gave the chapel a locomotive bell, highly polished and mounted on a baseboard. This bell had been used on No. 1582 (4-4-0), then on 802 (4-6-0), and finally on 1337 (4-6-2). •

THE BELL from Toronto, Hamilton & Buffalo 0-6-0 switcher No. 44 is now on its way to East Africa. Pretty soon it will be calling the brown-skinned natives to worship in a new mission being built at Kenya, in the jungles, for the Pasadena Community Church of St. Petersburg, Fla. This news is reported by Reginald Button, 61 Province St., S., Hamilton, Ont., Canada.

"Old No. 44 was sold as scrap to the Steel Company of Canada, here in Hamilton," he says, "but instead of junking this engine the salvagers steamed her up and are using her around the yard, for she is still in good shape." •

SECOND only to Kate Shelley as America's top railroad heroine was Mabel Peck, 19, who waded through swirling water at a track washout near her home a few miles west of Blair, Neb., in June, 1889, to stop a Chicago & North Western freight train that was speeding toward the washout. Mabel knew the train was due and used her coat to signal it.

A few weeks later, records the *C&NW Newsliner,* a special train from

Chicago stopped at the Peck home. Aboard were 20 company officials and their wives. They gave the girl a certificate and a $250 check. For many years thereafter, all trains passing Mabel's home tooted their whistles in salute. The hogger on one of those trains, A. H. Donnelson, married her. He died in 1943. Mabel herself passed away last December at age 84. •

THE FIRST long-distance rail hauls for solid trains of trailers of common-carrier truck lines—a new era in railroad and highway transportation—began last March when the Pennsy went into the "piggy-back" business between New York and Chicago, starting two new fast freight trains, one in each direction and each carrying about 100 loaded trailers. These trains are now leaving both terminals on every weekday. Extra-long flatcars were especially designed and built to carry the trailers, two on each car. The Pennsy calls it "TrucTrain" service. •

SALT LAKE CUTOFF. News of a "face-lifting" operation comes to us from C. T. Steeb, 240 W. South Temple St., Salt Lake City, Utah, in a clipping from the *Deseret News:*

Utah's famed "going-to-sea-by rail" Lucin Cutoff is scheduled for a bit of face-lifting. The Southern Pacific has announced that it is going to rebuild the road-track trestle span with a double-tracked, rock-filled roadbed. If there is any doubt how much prices have increased since the turn of the century, consider that the original job cost only $8,500,000 as compared with the proposed renovation program of $38,045,803.

For the first $8,000,000 the SP built 102.9 miles of railroad, from Ogden west to Lucin. This trackage saved 43.8 miles of distance required on the old route around the northern shore of Great Salt Lake over Promontory Mountain, famed as the place where the Central Pacific and Union Pacific tied together the first transcontinental track on May 10, 1869, with a golden spike.

For that price the SP also saved itself 3,919 degrees of curvature (enough curves to turn a train around 11 times). It eliminated 1,515 miles of grade. The amount of power required to take a normal freight train over this grade and which was saved would lift an average man 8,500 miles into the air.

Thirty miles of the cutoff are through the waters of Great Salt Lake, 12 miles being wooden trestle and the balance of earth and rock fill. The trestle required 38,256 trees which ranged in height, when cut, from 109 to 290 feet. Although the bottom of the lake was only 32 feet deep, it was very treacherous. An army of 3,000 men dumped into the 30-mile water cutoff unnumbered tons upon tons of earth and rock—sometimes as many as 400 carloads in a single day—and it sometimes seemed as if the project would have to be abandoned.

Actual work on the cutoff began March 17, 1902. The line was opened to traffic March 8, 1904. •

I LIKE your magazine so long as it runs lots of pictures," writes Guy G. Sanders, 1230 Holley St., N.W., Atlanta, Ga., "but you should print more about roadways, bridges, maintenance, rail weights, ballast, etc., in connection with the lines you feature.

"For example, I have seen the Georgia & Florida in its steam days with two light Pacifics wheeling 40 freight cars 50 miles per hour on 70-pound rails with no ballast at all. The Gainesville Midland, an all-steam road in my state, uses 60-pound rail with almost no ballast. This 41-mile freight line boasts three 2-8-0 locomotives and three 2-10-0's, all stoker-equipped. I have seen a 2-10-0 on the GM pull 33 cars. The road takes in some $15,000 per mile yearly gross revenue, which isn't bad.

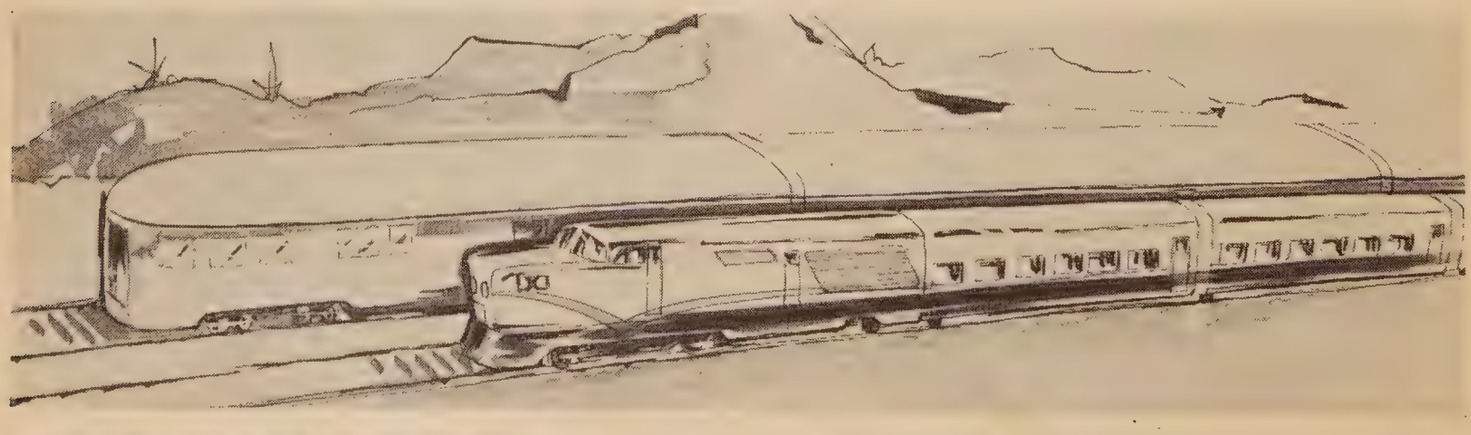
"Atlanta has no steam operation at present, but the Central of Georgia keeps two 4-8-4's stored in their shop yard on Lakewood Avenue. The Seaboard Air Line also has a few steamers, mostly 2-8-2's, stored in their Howell yards, Atlanta. I have driven alongside SAL tracks in south Georgia and watched the *Silver Meteor* run on 100-pound rail with heavy ballast, passing me easily while I was making 80 mph. The *Meteor* must have been doing at least 100.

"At Winston-Salem, N. C., the other day I saw a handsome little 2-8-0 head into the Wadley Southern yard with a road freight. Judging from the stack, cylinders, etc., she was built by the Norfolk & Western. Both the WS and the Louisville & Wadley in this section of the country run steam-operated mixed trains. Both are closely connected with the Central of Georgia." •

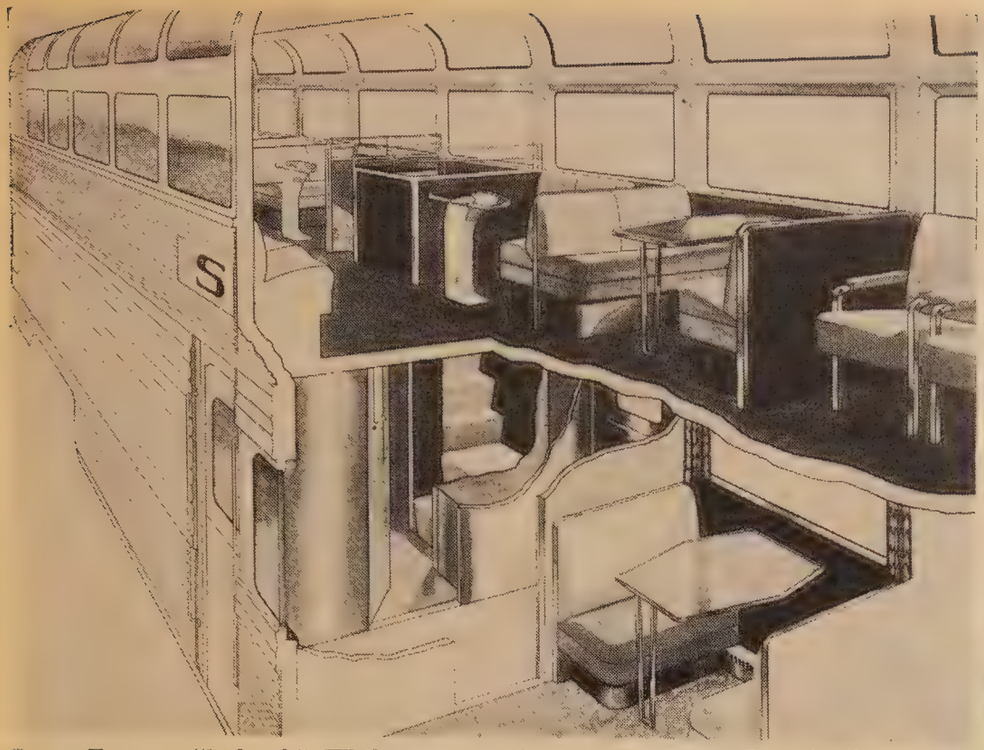
ARTICLES on gas-turbine and steam-turbine locomotives appeal to Benjamin Meeker, Charleston, S. C., he tells us, "because they tell about roads that are not all-diesel. When will we get atomic locomotives?"

Nobody can answer that question yet. The carriers are keeping tabs on progress in the nuclear-energy field. For years the Association of American Railroads has had a mechanical engineer duly accredited to the Atomic Energy Commission. His duty is to observe the workings of the Commission staff, insofar as national security permits, so that when the harnessing of atomic power reaches a point where it becomes practicable for locomotion by land, the railroads will be ready. •

B&M FIREMAN Louis LaSalle of Concord, N. H., age 22, who rescued a baby from the path of a Boston & Maine freight train at Rindge, N. H., is reported to be in line for two awards—a Presidential Medal and a Carnegie Hero Medal. •



Artist's sketch compares a conventional streamlined train (in the background) with the radically new lightweight locomotive and passenger cars that Baldwin-Lima-Hamilton and Pullman-Standard are building for the New York Central and the New Haven. This ultra-modern equipment is scheduled for delivery next spring.



Santa Fe goes "hi-level." While some roads concentrate on plans for low-center-of-gravity trains, the AT&SF is getting what is calls "customer appeal" for its all-chair-car *El Capitan*.

ABANDONMENT of the entire 39-mile Cowlitz, Chehalis & Cascade in Lewis County, Wash., is authorized by the Interstate Commerce Commission. Depletion of timber in that area deprived the road of its chief source of revenue. •

ONLY ONCE in his 42 years of Illinois Central service did David H. Neel show up late for work, columnist Eldon Roark writes in the Memphis, Tenn., *Press-Scimitar*.

Dave is a clerk in the IC's Memphis freight office. One wintry day in 1918 the snow lay 2½ feet deep—which is really something in the South—and the local streetcars stopped running. So Dave walked to work, 3½ miles. Both ears froze and they gave him quite a lot trouble all the way. He was due in the office at 8 a.m. but did not arrive until 8:05 a.m. It is only fair to add that Dave's perfect on-time record in the past 37 years has atoned for his one five-minute slipup. •

WHENEVER *The Powhatan Arrow* passes Ingleside, W. Va., passengers in the know gather on one side of the Norfolk & Western train to watch a daily occurrence. Trainman W. H. Adkins tosses a rolled-up newspaper into the yard of I. R. Ramsey. A beautiful hound dog named Big Boy catches the paper in his jaws, or quickly retrieves it from the ground, and delivers it to his master, a retired N&W lightning slinger. •

SOUTHERN PACIFIC'S Sacramento shops have just built a "Tela-View" boxcar. One side is transparent plexi-glass, allowing you to watch load shiftings caused by various speeds of coupling the car. A speedometer records the speed of impact on coupling at from 1 to 15 miles per hour. The new equipment is used in a training program for car-loaders. Any hobo wishing to steal a ride in it is out of luck. •

COMPLAINT to a Pullman Company official was made the other day by railfan Clark M. Eichelberger (address not given us), as follows:

"You inform me that your rules are that a Pullman ticket must be cancelled a day before train departure. Now, how could you cancel a ticket the day before, when it was not even purchased until the day of departure?

"Apparently some railroad officials think they are still living in the days of exclusive railroad travel. In those days people often planned trips considerably ahead of time. A trip was an event. Most tickets could be cancelled, if necessary, a day ahead of time. But now people go back and forth between New York and Washington, D. C., for example, as though the two cities were suburban to each other. I presume that most people who take that trip make

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Some little piggies went to market; others protested against abandonment of West Shore passenger service.

up their minds on the day they go.

"If the railroad is to compete with the airline, it must adapt itself to emergency travel, as the planes do. Suppose I buy a plane ticket and find that I am unexpectedly kept at home. I can get my money back on the spot, or exchange my ticket for one on another airline. And these things are usually done with courtesy and dispatch." •

PIG MASKS were worn by West Shore commuters, male and female, on a recent southbound trip to Weehawken, N. J., as a spectacular protest against the New York Central's announced decision to end passenger service on that line. The masked riders represented the more than 5,000 residents of New York and New Jersey who use the West Shore line five days a week to get to and from the big city.

The porcine falsefaces recalled the famous railroad ads of 1946, put out by Robert R. Young, now the Central's chairman, stating, "A hog can cross America without changing trains—but *you* can't." Today's passengers retort, "A hog will be able to ride the West Shore—why can't we?"

Citizens United Transit Committee organized the demonstration. The "piggies" on board read their morning papers, drank glasses of water, smoked, and chatted with fellow passengers. •

FORGOT ONE THING. He brushed his teeth every morning . . . the doctor examined him twice a year . . . he wore his galoshes whenever it looked like rain . . . he slept with his windows open . . . he stuck to a diet of proteins, milk, fresh vegetables, and vitamin supplements . . . he golfed, but never more than 18 holes. The funeral will be held Friday. Surviving him are 9 specialists, 4 health institutes, and 17 manufacturers of antiseptics. He had forgotten about trains at a grade crossing. •

72 YEARS of collecting engine and train photos—that's the hard-to-beat record of Clarence J. Root, senior meteorologist, retired, U. S. Weather Bureau, 193 Moss Ave., Highland Park 3, Mich.

"I was given my first engine photo at the Chicago Railroad Fair, Rogers Locomotive exhibit, as a small boy in 1883," he writes, "and have been collecting ever since. I now have 590 choice photos, practically all of them made by professionals, that I'd like to sell—but only in one lot.

"Some pictures show engines built as long ago as 1830. All came from such sources as builders (Rogers, Brooks, Baldwin, Alco, Lima, etc.) and railroaders I met while president of a Springfield, Ill., club that annually had a 'Railroad Day.' Of this rare collection, 174 shots are historical: Lincoln's and Grant's funeral trains, the first train across Eads Bridge, St. Louis, etc."

Mr. Root, age 80, has to sell because he is ill and desperately needs cash for doctor bills. •

RAILROADIANA, about six tons of it, comprise the collection of George E. Tillitson, Rte. 3, Box 1216, Auburn, Wash. Because of an accident and illness he must get rid of it all.

"This material cost me nearly $1,000," he writes, "but I will donate it free to any good Far Western library that wants it. One librarian made two trips to my home and finally said there was too much stuff for him to handle. If I can't give away this collection as a unit, I'd like to sell it piecemeal to fans. No reasonable offer refused. Whatever is left over in the fall will have to be junked.

"There is too much to catalog. I have, for example, some 5000 employes' timetables and 20,000 public timetables —steam, electric, mostly U.S., some foreign—and hundreds of *Official Guides*.

"Also many *Poor's* and *Moody's Manuals*, about 7000 maps, books on locomotives, rulebooks, travel guides, engineering books, ICC reports, and bushes statistical data. Almost complete sets of *Railroad Magazine* and *Trains* in bound

volumes. Bound volumes of other magazines, some newspapers. Innumerable photos, tickets, train orders, passes, old tariffs, railroad stock certificates, trolley transfers, switch keys, links and pins, and train-order hoops.

"Plus much material on rival transportation—air, highway, water—and a cane collection and a Civil War sword.

"I will answer everyone who asks about specific items and encloses a self-addressed stamped envelope."

Another collector, Rev. Wm. K. Viekman, 12 Arden St., New York 40, N. Y., wants to dispose of all his railroadiana and rare traction material because he plans to go into foreign missionary service. Items include 1902 *Official Guide*, 1887 LS&MS timetable, etc. Will send his list for a 3c stamp. Specify steam or traction interest. •

BIRTH IN A BERTH. The *California Zephyr* is in a gay mood, figuratively trailing blue ribbons. You guessed it. A passenger, young Mrs. Peter H. Zars, was delivered of a baby named Peter the other day while rolling westward on Denver & Rio Grande Western rails in Ruby Canyon near Mack, Colo. It was the first birth on this train. When Mrs. Zars' labor pains began, the train's hostess-nurse called for a doctor on the loudspeaker system. There was none aboard, so she and two women passengers officiated, and at Grand Junction the mother and baby went to a hospital. •

A TALE OF TWO CITIES. More than five years ago the Texas & Pacific presented locomotive No. 638 to the State Fair of Texas in Dallas as "the world's largest Christmas gift." It was to have been a permanent memorial to the great days of steam railroading. But what happened? Brace yourself! *The State Fair has just scrapped her—given a fine locomotive to the blow-torch.*

As *T&P Topics* tells the story, shortly after the presentation December 22, 1949, vandals began taking off small levers and gages, breaking the cab windows, hacking and marking, defacing both inside and out with pencils, crayons, paint, chalk, and lipstick! Result: the mighty Texas type (2-10-4) became a shabby mess, an eyesore, and was doomed.

A sister locomotive, No. 610, which T&P gave to the Fort Worth Southwestern Exposition & Fat Stock Show about four years ago, is still in excellent condition. Why? Fort Worth knows how to appreciate an iron horse. Around the 610 runs a high fence topped with barbed wire that vandals can't climb. A watchman stands guard over the old retired engine. Last year alone, the city spent $500 sprucing her up.

But at Dallas nobody guarded or cared for the 688. Today, Fort Worth glories in a railroad monument of the storied past, while Dallas railroadists hang their heads in shame. •

OUR April title contest was based on the photo of a flag-draped locomotive, No. 2701, that the C&O gave to the City of Buffalo, N. Y., as a lasting memorial to steam power. Some clever entries came in. These include:

American heritage, Honorable discharge, Covered wagon, Under its last flag, Iron-horse blanket, Old Glory, All dressed up and no place to go, Her rolling days are over, Journey's end, In memoriam, Old soldiers never die, and a paraphrase of the remark Secretary of War Stanton made when President Lincoln died, *Now (s)he belongs to the ages.*

A $10 prize for the "best" title, *Delinquents' delight,* goes to Neal McDonald, 46 Tomaka Dr., Hamburg, N. Y. If you doubt the appropriateness of that entry, read the item telling what happened to a retired T&P engine at Dallas, Tex., and McDonald's letter:

"The 2701 is displayed in Buffalo's worst part, the waterfront, near a public highway. Young vandals are fast wrecking and defacing her. They've already smashed all the cab windows, the headlight, the tender lights, and the gages. The little darlings twisted off gage needles, threw away valve parts, mutilated the coupler, and even lifted up both seatboxes to defecate in the cab!

"Police? Don't make me laugh? Cops nabbed several boys whom they caught there in acts of vandalism, but judges freed the culprits and actually censured the officers for making the arrests!

"I understand that, over the Mayor's veto, the public-spirited Buffalo City Council appropriated money to fence in the 2701—as was done for the T&P exhibit at Fort Worth, Tex.—but red tape seems to be stalling the job. Meanwhile, the National Railway Historical Society, Buffalo Chapter, has paid $133 for a bronze marker identifying the 2701." •

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Erie Railroad

Amid the thunder of exhausts, Erie pusher locomotives wearing steam clouds and black smoke plumes used to help the long, heavy, coal drags over the mountain at Black Rock cut, just east of Port Jervis, N. J.

THIS AUGUST the entire New York Central station building at Mount Kisco, N. Y., will be jacked onto wooden rollers, dragged by a winch-truck 125 feet westward, and set in position for a new track alignment. The relocation of the old depot and three-quarters of a mile of track is required to eliminate a grade crossing. •

OLDTIMER CRADDICK'S letter on the "glamour" of railroading in "the good old days" evokes this reply from L. H. Jones, 319 Montgomery St., Bremerton, Wash.:

"Mr. Craddick was right to the point, as you'll hear from anyone who railroaded before 1900 and up to the time the ICC Bureau of Inspection took over. In my railroading days I was on duty sometimes as long as 72 hours without sleep, part of which time we spent waiting on sidings for opposing trains. I never go for such 'glamour.'

"Bill Knapke's article on 'Memory Lapses' recalls a day in 1896 shortly after I'd begun firing on the Clover Leaf. My engineer was Henry Wilson, my conductor Browning. We received an order to run extra from Madison Yard in East St. Louis to Ramsey, Ill.

"Next to the engine were several cars for the Baltimore & Ohio Southwestern, which crossed our line at Cowden, Ill. Arriving at Cowden, we prepared to drop those cars. Although I had never handled an engine, Wilson suddenly asked me to take the throttle while he went over to chin with Conductor Browning, who was standing on top of the car just ahead of the engine. Later, we coupled the train and left town.

"About a year afterward, while I was laying over at Charleston and visiting Wilson in his home, he inquired, 'Do you remember the time I asked you to take over the engine at Cowden?' I nodded. Said he: 'I did that because I'd just discovered we left Ramsey without running orders and I wanted to talk it over with the conductor. Browning was upset, wondering what to do. Well, I told him that I thought I knew which dispatcher had issued the order from the St. Louis office. I said that by this time the dispatcher himself probably knew what had happened. So I asked the conductor's permission to go on ahead without orders, depending upon the dispatcher to take care of us so far as westbound extras were concerned.' We did just that, and reached Charleston without incident. The scheme worked." •

CORRECTIONS. Several sharp-eyed readers picked out the following in our April issue: Photo at bottom of page 23 really showed a 1000-horsepower diesel of the Omaha Road (part of C&NW), not Milwaukee Road, as our caption stated. That engine is not a sister of the one shown at top of same page, the units of which are *each* 2000 horsepower.

Loco pictured at top of page 24 is correctly captioned, except for the fact that the last two units are Alco, not Electro-Motive. It is unusual to see diesels of different makes MU together, as in this case. Says Ray Lowry: "On page 24, how about the New Haven's dual-purpose units with the passenger-style bodies Alco built during World War II? And in the Electro-Motive list you omitted SD9 and TR800 models.

"On page 24 you picture a CNJ engine which you say runs on the New York & Long Branch," comments Sy Reich. "Although these locomotives are not outlawed from that section of track, according to CNJ rule 107, engines without ATC are not to be regularly dispatched on the NY&LB.

"Also, you failed to mention some of the main milestones in diesel progress such as the invention of the present type of electrical transmission (credited to GE-EMC) and the development of road diesels. I hope you will continue to give diesels some attention."

Caption for photo at bottom of page 13 describing the *Crusader* as "the Reading's only streamliner" was intended to mean the road's only streamliner at the time that photo was taken, before the Reading streamlined its *Wall Street, Schuylkill and King Coal* trains. Emanuel Reider tell us that *Pacific* No. 118, shown on the *Crusader,* had her hood removed in the summer of 1950.

Norfolk & Western locomotive pictured on page 28 is 1207, not 107 as caption said, corrects Lester Harlow.

New name of Black Mt. RR (May issue) is Yancey, not Yodkin.

Robert R. Brown, Eastern Canadian representative of the Railway & Locomotive Society, informs us that Sir James Bunn (mentioned in "One-Man Railroad," March issue) is a Canadian, not an Englishman, and is head of the Algoma Central & Hudson's Bay Railway and many other companies. "Oddly enough," says Mr. Brown, "he was born and raised in New Brunswick, not far from the One-Man Railroad." •

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(R) HOWELL DAY, 300 Vail Ave., Dunellen, N. J., wants *Railroad Magazine* for Feb. and Mar. '31; July '30; also all copies before '30; will pay cash or swap dup. *Railroad Magazines*, *National Geographics* stamps or model rr. kits.

(R) WAYNE DUCHON, 828 Gage Ave., El Monte, Calif., will sell 11 *Railroad Magazines* '07 to '17, good cond.; '30 to '33, cut; '35 to '50, good cond.; hundreds of collectors' mags.

MARTIN FALLON, 2723 Ann St., Philadelphia 34, Pa., will sell or trade emp. tts. and tr. ords.; list for stamp.

(R) D. E. FARROW, 424 N. Stafford Ave., Richmond 20, Va., will sell *Railroad Magazine* Jan. '45 to July '54 (exc. May and Nov. '47 and Jan. '48) 25c ea. postpaid for lot, or 20c ea. you pay postage; all good cond., covers intact.

JACK FISHER, 3539 Madison Ave., Lansing, Ill., wants to correspond with engineers or firemen on any road; plans to become eng. himself.

(*) BOB GARASHA, 4102 Argyle St., Chicago 30, Ill., will sell 50 ft. 8 mm. black and white movies of Chi. elec. lines taken 1950, city and interurban.

C. O. GAY, 118 N. Carver St., Warren, Pa., has large collection pix, also history and data on many roads.

(*) TED GLEICHMANN, 237 Washington Ave., Chatham, N. J., will sell 5x7 set of 5 pix Baltimore Transit eqmt. built 1880-1927, incl. horsecar, bus, 3 streetcars, $1.25 ea., 8x10 set $2.50.

(R*) RAY GOUGH, 266 Clinton Ave., Jersey City 4, N. J., will buy elec. road emp. tts., tr. orders pix; also Jan., Feb. '53 *Railroad Magazine*.

(R) Mrs. FEDORA GRAY, 85 N.W. 42nd St., Miami 37, Fla., wants to dispose of her late husband's large collection of *Railroad Magazines*. Write for details; make offers.

HENRY GRIFFITHS, 2714 Ponderosa St., Boise, Ida., will sell 5x7 pix steam action of Western roads, 12 for $2; list and sample 25c; wants any pix of Spokane Intl. steam power.

(R) HERMAN HAACK, 1257 South St., Toledo 9, O., will sell *Railroad Magazine* Jan. '37 to Aug. '54, all good cond., for best offer over $20 plus postage

(*)JOHN HANBACH, Goodrich Rd., Clarence, N. Y., will trade 120 tts. 1936-'52 for current set of Cleveland trsfs. or sell for $5.

(*) DON HANSEN, 3904 19th St., San Francisco, Calif., will sell pix of SF Muni. or trade for abandoned elec. lines or eqmt.; list 3c or your list.

FRANK HARMER, 4708 N. 38th St., Omaha 11, Neb., wants pix, size 116 to 8x10, of old UP engines 800 series 4-4-0; also pix size 5x7-8x10 old UP Omaha shops.

JAMES HARVEY, 2237 Graham St., Abilene, Tex., wants pic C&S loco 7.

R. J. HEINEN, Halbur, Ia., will buy records of steam loco whistles; also MoP history or book.

E. S. HERA, 7008 Cresheim Rd., Philadelphia 19, Pa., wants PRR wall calendars before '54; has some for '46 to '50 incl. for trade or sale.

JIM HICKS, 4704 Vineta Ave., La Canada, Calif., is selling big collection war relics, railroadiana, related books; 5-page list 9c.

RAY HIGGINS, 419½ Katahdin Ave., Millinocket, Maine, sells p.c. prints of everything on Bangor & Aroos., 12c ea., or on approval. Also cars, stations, emp. tts., passes, of other roads.

(*) FRED HUBNER, 100 Lettington Dr., Rochester, N Y., will buy NYC, PRR diesel and steam loco pix,

also city and interurban trolley pix, USA and Canada; good cond.

(R) D. L. HURST, 7829½ Franklin Pl., Hollywood 28, Calif., buys, sells, trades old issues *Railroad Magazine*, other mags., books; send wants or ask for lists.

(*) SHELDON KING, R.D. 3, Waterloo, N. Y., sells size 616 trolley pix; list for 3c stamp; lines incl. CSL, CNS&M, CTS, etc.

(*) GLENN KRUSCHKE, Box 501, Largo Fla., wants size 116 or 120 rr. negs. from South, Central and North America; also Caribbean Islands steam, diesel or elec.; write for details.

WOODROW LAWYER, 545 Broadway, Hanover, Pa., will pay $1 ea. for pix of WM G-7 (4-6-0) Nos. 101, 102, 103, 104, 105.

ELVIN LIQUE, 917 N. 3rd Ave., Wausau, Wis., will buy color 8 mm. movies of B&O, C&O, N&W, UP mallets and trains in Chicago and Twin Cities area.

JERRY McCARTHY, 1142 Bobbett Dr., San Bernardino, Calif., wants Soo Line emp. tts. Wis. Div.; also Soo eng. pix, St. P. Div.

(*) Pfc. GENE McKEEVER, C Btry., 598 F.A. Bn., Fort Sill, Okla., wants pix of Denver streetcars and Denver & Intermountain.

(*) JOHN MACLEAN, 542 Cranbrooke Ave., Toronto 12, Canada, will sell pix of US and Canadian steam and elec. lines, size 116-616, 15c ea., p.c. 25c, 4x7 35c, 6x10 50c; list and sample 25c.

ROBT. MARCUS, 257½ W. 42nd St., Los Angeles 37, Calif., sells size 616-620 traction pix from all over US, some European cities, 5c ea.

(*) ARA MESROBIAN, 7410 Connecticut Ave., Chevy Chase 15, Md., wants Ira Swett's *Interurban Specials No. 3 and 4.*

(*) J. F. MONHOFF, 624 E. Marigold St., Altadena, Calif., will sell size 518 pix AT&SF, SP, PE, others; many 35 mm. black and white negs.; write for either or both lists.

C. L. NELSON, 821 W. Idaho Ave., St. Paul 13, Minn., will pay top price for colored slides of streamlined and semi-str. steam locos; write first.

(R) STUART NELSON, 903 N. Arnold Ave., Thief River Falls, Minn., wants back issues *Railroad Magazine* Aug. '32, Feb. '34, Aug. '35. Will poy 40c ea.; also will trade Soo loco pix; will exch. lists.

CHAS. OGREN, 244 Church St., Burlington, Vt., will buy 8 mm. good color or black-white shots, any road, live (not stored) steam locos. Clips should be 2 ft. long.

J. O'MEARA, 3615 E. 29th Ave., Vancouver, B. C., Canada, has new kodacraft developing kit comp., cost $18.95, sell for $15.

E. S. PEYTON, Box 927, Greeley, Col., has tickets, tts., switch locks, keys, tr. ords., passes, uniform buttons, register books, from Mid. Term, F&CC, D&RG, C&S s.g. and n.g., CM, UP, other Western rds.; will sell or trade for other Colo. items.

JOHN QUINN, 39 Foxhurst Lane, Manhasset, L. I., N. Y., wants photos NYC System steam and elec. locos, stations, cars, scenic views.

A. POSCHMAN, 4627 Murdock Ave., N. Y. 66, sells pix of NYC, PRR, JCL, NYNH&H, B&O, DL&W, Talgo train, others. List and sample, 10c.

RAIL PHOTO SERVICE NEWS and bulletins, edited by Elwin K. Heath and Lloyd E. Meal, mimeographed, will be mailed regularly, free, on request to 309 Sherman Bldg., 93 Massachusetts Ave., Boston 15, Mass.

BILL RADCLIFFE, Box 375, Webster, Mass., will trade sixe 616 negs. NH, B&M, CV, N&W, D&RGW n.g. for kodachrome 35 mm. slides and color movies; will buy New Haven and n.g. negs.

PETE RASMUSSEN, Sutphin Ave., Matawan, N. J., will pay your price for any size pix of locos now in use on Flemingsburg & Northern and Argent Lbr. Co., Hardeeville, S. C.

(R) HOWARD RESSLER, 3822 W. 10th St., Erie, Pa., wants *Railroad Magazine* Jan., Feb., Mar. '32, July '36, Jan. '38, June '43; state price, cond.; also buy compl. years before '32.

(R) W. ROBBINS, 1313 N. John St., Palestine, Tex., will sell or trade *Railroad Magazine, Trains*, pub. tts., emp. tts., annual passes; list for 3c stamp.

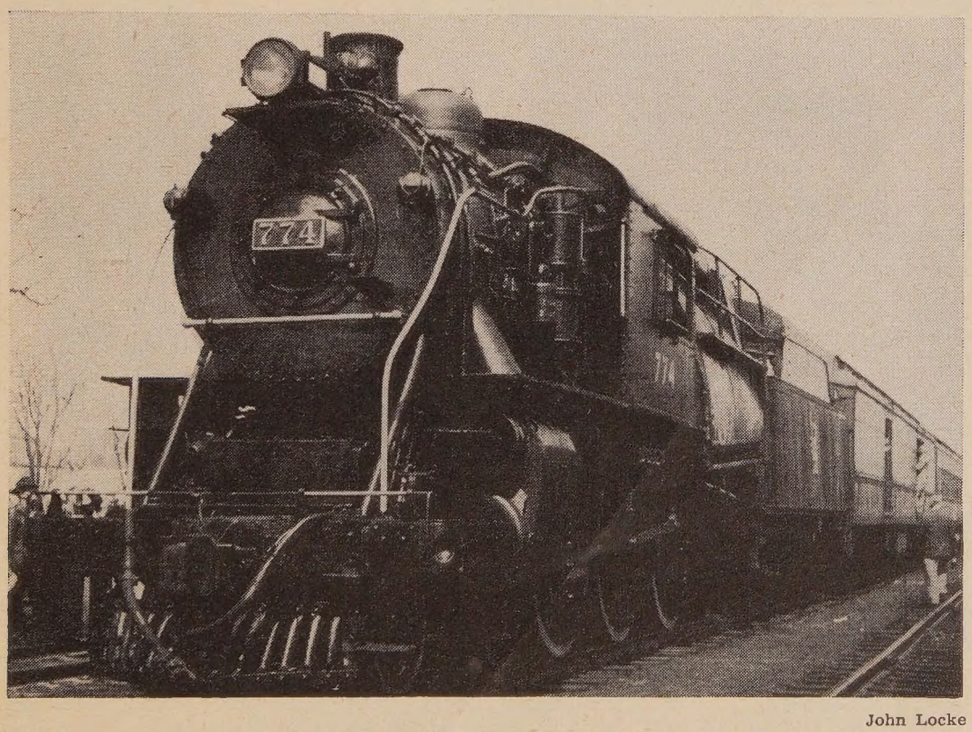
IVAN SAUNDERS, 472 Belonda St., Pittsburgh 11, Pa., wants pix and info. on Kanawha & Michigan eng. 15; sells sizes 116 and 122 pix various steam roads; write for list; publishes *Locomotive Newsletter* monthly, steam history, 50c yearly.

(R) F. W. SCHLAAK, 301 Tompkins St., Fond du Lac, Wis., will sell *Railroad Magazine* from Dec. '38, *Trains* from Oct. '45, *Railway Transportation* (Aus.) from June '52, all to date, good cond., 35c ea., 3 for $1 postpaid; also several books.

(*) MARK SCHLAMM, 101 Scholes St., Brooklyn 6, N. Y., will sell *Train Wire* by Anderson, $3.50; *Story of Rapid Transit* by Wilson, $2.50; *Trains, Tracks and Travel* by Van Metre, $2.50, all postpaid.

(R) JOE SENDERAK, 2619 Cortez St., Chicago 22, Ill., will sell copies *Railroad Magazine*, good cond., 25c ea. plus postage, any issue from '38 to '54.

(*) A. R. SHADE, Jr., R.F.D. 2, Columbia Station, O., will sell or trade juice pix CTA, CSL, CRT,



John Locke

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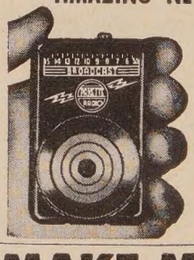

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CRC, CTC, ITS, CSW, etc.; list, sample 10c; sell or trade steam pix NYC, B&O, PRR, Rdg., CPR, CNR, GTW, etc.; list, sample 10c.

(*) J. W. SHANNON, 4912 30th Ave. S., Minneapolis 17, Minn., will send souvenir playing card showing North Shore Line *Electroliner* for stamped addressed env.

C. L. SMITH, 339 Waverly Ave., Newark 3, N. J., wants size 616, 116 negs. any PRR locos.

(R) ANDREW SPISHAK, 718 Adeline St., Trenton 10, N. J., will sell *Railroad Magazine* '45 thru '54, fair cond., $30 plus postage; will buy *Century of Reading Co. Motive Power*; misc. railroadiana, trade or sell.

JOE STAUBER, 709 W. Arnold St., Marshfield, Wis., has size 3½x4½ steam pix to trade Milw., Omaha C&NW, DM&IR, NP, CB&Q, Soo, etc.

DON STEFFEE, 512 8th Ave., Brooklyn 15, N. Y., will trade or sell wide selection of emp. tts., fairly recent. Offers old large trunk-line emp. tts. for trading. Send for list.

KEN STEPHANISHIN, Box 302, Revelstoke, B. C., Canada, would be grateful for any engr. or condr. sending his steam loco train order.

(*) WM. STEWART, 304 Orchard St., Chagrin Falls, O., will buy CERA Bulletin 96 *Elec. Railroads of Ohio* and Buletin 91 *Indiana RR. System.*

(R) H. A. SUMMERS, Box 7013, Norfolk 9, Va., will sell back issues *Railroad Magazine, Model Craftsman, Model Railroader, Trains*; stamp for list.

(*) DICK TESCH, 6855 Northwest Hy., Chicago 31, Ill., will buy size 616 negs. and 8 mm. movies of elec. rys. Sells negs.; no list.

(R) F. J. TRUCKENBRODT, H9 Savoie St., Lodi, N. J., wants July, Aug. '49, March '50 *Model Railroader*. Has many issues *Railroad Magazine* and Jan. '50, May '47 *Model Railroader* to trade.

(*) LARRY VODRA, 715 Kieffer St., Wooster, O., will sell pix of new CTS Rapid Transit, color and black and white; list, sample 10c. Wants back issues of *Interurbans* by Ira Swett.

JOHN WEIGHTMAN, Box 696, Sacramento, Calif., will sell SP Western Div. emp. tt., 1944, $1.

ARTHUR WELLS, 64 Martyrs Field Rd., Canterbury, Kent, England, wants all-time loco info., PRR, NYC, bldrs. nos., dates built and withdrawn, and disposal info. on locos not scrapped; also NYC renumberings.

LLOYD WILBUR, 279 Thomas St., West Haven 16, Conn., wants pix, maps, info. on Belfast & Moosehead Lake eqmt. for modeling purposes.

BOB WILKENS, 124 Carman Ave., East Rockaway, N. Y., will trade size 616 and p.c. of Western and SW roads for LIRR action pix of steam locos.

DAVE WILSON, Wenonah, N. J., wants pix of P&B, Barnagat, CNJ trains at Barnagat, N. J., and CNJ and PRR at Whitings, N. J.

(*) WALTER ZULLIG, 475 Oak Ave., Maywood, N. J., sells p.c. size pix NY area roads and juice lines; list for stamp.

(*) STEVE ZAWACKI, 19366 Fenelon Ave., Detroit 34, Mich., will buy any pix or negs. of Detroit's DUR and DSR.

MODEL TRADING POST

HOWELL DAY, 300 Vail Ave., Dunellen, N. J., wants Lionel 708 switcher, kits for Hudson loco and tender, UP streamliner; pay cash or swap HO kits or old Lionel toy train catalogs.

G. JANES, 696 43rd Ave., San Francisco, Calif., will sell AF Hudson *Challenger* Alco A and B units, 4 frt. cars, 16 lengths trk., knuckle couplers, good cond., $85.

(R) FRANK LASS, 159 Geneva St., Elmhurst, Ill., will sell or trade for HO eqmt. *Railroad Magazine* comp. '43 thru '45; '47 exc. Dec. '48; all '49 but July, Oct.; all '42 but Mar., May, Nov., Dec.; Oct. '45; Jan., Feb., Mar., '50; May '52; won't split comp. years.

(R) JOE MOONEY, 206 Andover St., Wilkes-Barre, Pa., will sell or swap S and OO gage eqmt., also back nos. *Railroad Magazine, Model Craftsman, Model Railroader* for other OO items or Loco. Cyclo. or Car Bldrs. Cyclo.

(*) B. MOTOLIGIN, 19347 Albion, Detroit 34, Mich., wants HO Penna scale model PCC cars.

(R) E. F. STODDARD, 35 Ringgold St., Springfield 7, Mass., will trade rr. lanterns, *Railroad Magazine*, st.-gage trk., st. and O gage car parts, 5x7 steam negs. for size 116 steam negs, HO gage eqmt., military medals, minerals.

FLAGSTOPS

CLEVELAND RR. CLUB is sponsoring a tour of all Cleveland rapid transit lines Aug. 14, starting at Cleveland Union Terminal, Shaker Hts. platforms, 11 a.m., using 5 types of cars. Work cars available for photographing. This new system is one of the finest electric rys. operating anywhere. For details write Cleveland RR. Club, trio chairman, 15209 Detroit Ave. (rear), Cleveland 7, O.

NEW CHAPTER of National Railway Historical Society is being organized in Virginia's Hampton Roads area. Contact W. A. Carswell, 950 Hanover Ave., Norfolk 6, Va.

PEN PALS are entitled to free entry in our *Switch List* if they will mention whether they want to correspond with railroaders or fans, and in what section, and on what subject.

JUNE 19—Iowa Chapter, NRHS, and Iowa State Hist. Soc. plan C&NW Tama-Alden fantrip, $5. Contact Basil Koob, Box 279, Fort Dodge, Ia.

JUNE 24-25—Kansas City Chapter, NRHS, plans fantrip to Paola, Holden, and Sedalia via Katy and MP, $7.75. Sleep in caboose. Contact Ralph Cooper, 2632 Troost Ave., Kansas City 8, Mo.

JUNE 26—Buffalo Chapter, NRHS, plans fantrip via Erie RR. to Jamestown, N. Y., plus 4-hr. Chautauqua Lake cruise, $4.50. Same chapter plans TH&B fantrip Aug. 7 and B&O Autumn Leaf trip Oct. 9. Contact Wm. C. Kessel, 25 E. Quaker St., Orchard Park, N. Y.

NRHS has just formed a Pacific Northwest Chapter, one of its charter members being Stewart Holbrook, co-author of *Engine Smoke in the Big Woods* (page 12). For details contact secretary C. J. Keenan, 6354 N. E. Cleveland Ave., Portland 11, Ore.

JUNE 12—Pittsburg Electric Railway Club will sponsor a fantrip over the Pittsburg Railways Co.'s lines For details, contact Richard L. Bowker, 102 Woodside Road, Pittsburgh 21, Pa.

THREE-WEEK tour of British Rys., September 30, including plane trip to and from England, sponsored by Railroad Enthusiasts. For details send self-addressed stamped envelope to Arthur T. Knowles, Room 5646, Grand Central Terminal, New York 17, N. Y.

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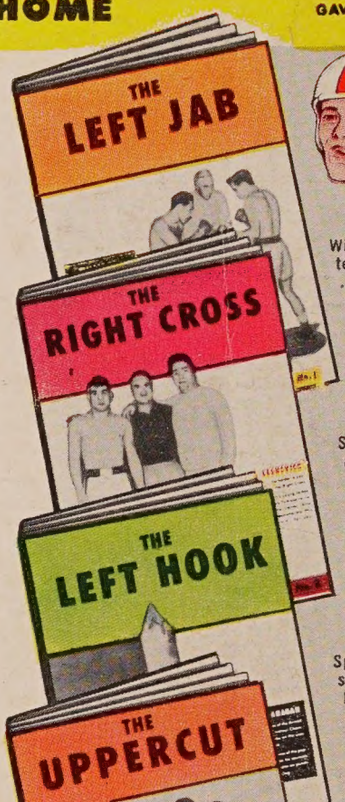

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